9-10-2024

Servant Leadership Model and Job Satisfaction in Manufacturing Environments

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This is to certify that the doctoral dissertation by

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Walden University
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Abstract

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Dissertation Submitted in Partial Fulfillment

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Doctor of Philosophy

Industrial-Organizational Psychology

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Abstract

The servant leadership model (SLM) is a leadership style that has been shown to improve performance and increase job satisfaction in many different industries, which is linked to quality-of-life improvement; however, there is a lack of research on the SLM's impact on the manufacturing environment. The conceptual framework stated there are seven characteristics of the SLM, and each should be investigated separately and altogether. To better understand the SLM's effects on job satisfaction, they were measured against the framework of job satisfaction as presented in the job satisfaction survey (JSS) by Spector. This research investigated the relationship between the SLM's characteristics and job satisfaction in manufacturing environments with a quantitative research method using 198 participants between ages 18 and 65 within the United States. The multilinear regression findings showed that in manufacturing environments there is not a significant relationship between job satisfaction and six of the SLM characteristics. However, the findings showed there was a significant relationship between job satisfaction, the overall SLM and the characteristic of behaving ethically in manufacturing environments. This is in alignment with the servant leadership framework in that each characteristic can act independently on other constructs. Further research should focus on additional moderator variables in manufacturing environments to account for the findings. The findings suggest that in manufacturing environments if leadership demonstrates the SLM and the characteristic of behaving ethically, then job satisfaction will increase, which will in turn, improve employees' quality of life resulting in positive social change.

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Dedication

I would like to dedicate this to my friends and family who have supported me throughout my academic career.

Acknowledgments

I would like to acknowledge all the people who helped me throughout my academic journey and all the sacrifices they made to support me.

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Chapter 1: Introduction to the Study

Introduction

In this chapter, I present the servant leadership model (SLM) and discuss its potential role in future business development. The SLM is unique in that it focuses on a leader's role in holistically engaging with employees' personal and professional development. The SLM focuses on a leader serving an employee for the employee to reach their highest-level potential (Kauppila et al., 2022). The SLM has a significant relationship with job satisfaction; however, the manufacturing environment has not been fully investigated to determine if there is a relationship between job satisfaction and servant leadership in this environment (McNabb, 2020). First, there will be a presentation of the social problems the SLM could potentially address. Next, there will be an overview of the research problem and purpose. This will be followed by a discussion of the frameworks that will be used, followed by the research questions and the study's hypothesis. Lastly, there will be a synopsis of the nature of the study along with its limitations and significance.

Background

The major social problems that are found in most job environments are physical and psychological health-related illnesses due to job stress. Job stress is often created by a work–life imbalance and can be measured using the job satisfaction survey (JSS). Research has shown that job satisfaction is heavily influenced by perceived work–life balance, where the feelings one has at work can influence one's life outside of work and vice versa (Ahmad et al., 2021). As a result, job satisfaction can indicate future physical

and mental health illnesses that can be caused or influenced by a stressful job environment. The job environment in most situations can be augmented based on leadership. Many types of leadership emphasize an atmosphere that focuses on productivity and/or job satisfaction in the workplace. The SLM has components that allow the leader to focus on individuals' work–life balance and improve their home life. Work–life balance would allow job satisfaction to be addressed at work and in one's home life (Aboramadan et al., 2022). A positive work–life balance allows more stressful job environments, such as hospitals, to have greater positive job satisfaction and reduced job stress. The research I conducted is a deeper investigation into the SLM and in which environments using components of the SLM can most affect specific components of job satisfaction. This is an integral discovery to determine in what context the SLM can benefit an individual's work–life balance, allowing job stress to be addressed in such a way as to reduce physical and mental health-related illnesses.

Problem Statement

The gap in the literature was how the SLM performs regarding job satisfaction levels in manufacturing organizational settings. A recent review of the literature on the SLM suggests the SLM has a different relationship with job satisfaction in different environments (Eva et al., 2019). The SLM typically has a positive effect on job satisfaction in most studied environments, which include the healthcare and service industries (Malingumu et al., 2016). However, recent research has suggested that manufacturing environments may not have a beneficial response to the SLM (McNabb, 2020). Additionally, this finding indicates that a broader category of inquiry, such as job

satisfaction, would give better insight into the SLM's effectiveness in a manufacturing environment. This study was conducted to address the lack of research on the relationship between the characteristics of the SLM and job satisfaction in manufacturing environments.

Purpose of the Study

The purpose of this quantitative study was to examine the relationship between the characteristics of the SLM and job satisfaction in a manufacturing environment. The SLM characteristics were measured using the Servant Leadership 7 (SL-7). Those characteristics include (a) emotional healing, (b) creating value for the community, (c) conceptual skills, (d) empowering the employee, (e) helping subordinates grow and succeed, (e) putting subordinates first, and (f) behaving ethically. The SL-7 is a seven-question survey that uses a Likert scale and has been shown to be an effective measure for the SLM (Linden et al., 2015). The JSS is a 36-question survey that also uses a Likert scale and measures the elements of job satisfaction, and those elements are pay, promotion, supervision, benefits, contingent rewards, operating, procedures, coworkers, nature of work, and communication (Spector, 1985). This is explained further in Chapter 2 and Chapter 3.

The critical fundamental difference between this study and other studies is that I was focused on the manufacturing environment. The manufacturing environment has many differences from other previously researched environments that may limit or even conflict with the SLM's ability to affect job satisfaction (Viljoen, 2019). One of the most significant differences is that employees have a high turnover rate as an industry standard

in manufacturing, especially in low-level manufacturing. For the SLM to be effective, an individual must develop trust over time and social exchange theory must be in place (Amah, 2015). If an employee is not at a company for a longer period, then the SLM will not have time to work. A potential drawback of this is that a more transactional leadership role is traditional, and employees are used to experiencing this kind of leadership. If an employer uses an SLM, it could decrease job satisfaction and further increase the turnover rate because the employee is not given what they are expected to be given (Canavesi & Minielli, 2021).

Research Questions and Hypotheses

This following research questions and hypotheses were utilized in this study:

RQ1: What, if any, is the relationship between the SLM characteristic of emotional healing and job satisfaction in a manufacturing environment?

$H_0$1: There is no significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

RQ2: What, if any, is the relationship between the SLM characteristic creating value for the community and job satisfaction in a manufacturing environment?

$H_0$2: There is no significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

H_A2: There is a significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

RQ3: What, if any, is the relationship between the SLM characteristic conceptual skills and job satisfaction in a manufacturing environment?

$H_0$3: There is no significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

RQ4: What, if any, is the relationship between the SLM characteristic empowering the employee and job satisfaction in a manufacturing environment?

$H_0$4: There is no significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

H_A4: There is a significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

RQ5: What, if any, is the relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in a manufacturing environment?

$H_0$5: There is no significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

H_A5: There is a significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

RQ6: What, if any, is the relationship between the SLM characteristic putting subordinates first and job satisfaction in a manufacturing environment?

$H_0$6: There is no significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

H_A6: There is a significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

RQ7: What, if any, is the relationship between the SLM characteristic behaving ethically and job satisfaction in a manufacturing environment?

$H_0$7: There is no significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

H_A7: There is a significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

RQ8: What, if any, is the relationship between the SLM and job satisfaction in a manufacturing environment?

$H_0$8: There is no significant relationship between the SLM and job satisfaction in manufacturing environments.

H_A8: There is a significant relationship between the SLM and job satisfaction in manufacturing environments.

Theoretical and/or Conceptual Framework for the Study

Priorities, principles, and practices categorize the framework of the SLM (Zorlu et al., 2019). Each concept has three features, equating to nine total key components that are practiced behaviors. The three key priorities are (a) developing people, (b) building a trusting team, and (c) achieving results (Tanova & Alafeshat, 2019). The three key principles are to (a) serve first, (b) persuade, and (c) empower (Tanova & Alafeshat,

2019). The three key practices are (a) listening, (b) delegating, and (c) connecting followers to the mission (Tanova & Alafeshat, 2019). All the previously mentioned components include an underlying willingness to serve; the servant leader is trying to develop the employee to be the best person they can be, both inside and outside the workplace. These underlying attitudes are grouped into ten traits that characterize a quality servant leader. These traits include empathy, listening, healing, awareness, persuasion, conceptualization, foresight, stewardship, committing to the growth of people, and building community (Clark, 2019).

For a measurement to be successful in evaluating a servant leader, it must measure the 10 traits listed above and determine how well they are being practiced utilizing the nine key components. In some contexts, the SLM uses trust to establish a leadership dynamic. However, if trust is low, the servant leader may use social exchange theory to establish an effective leadership dynamic. My research examined multiple contexts to accurately conceptualize how the leadership dynamic is taking place to understand the effect of the components of servant leadership on overall job satisfaction (see Ahmad et al., 2021).

In the research questions, some pieces of the SLM are more effective than others, and social exchange theory could explain why. Social exchange theory suggests that when one person gives a good or service to another, then the other person feels a sense of obligation to return with a good or service with equal or greater value. In the servant leadership paradigm, the authority assists and supports the employee beyond what is required by their job criteria (Alasadi et al., 2019). This works on the power distance

framework. Power distance is the psychological perception a subordinate feels regarding how much power and control the leader has over them. The greater the power distance, the more the employee feels like a subordinate. The less power distance, the more the subordinate feels equal to the leader. In the SLM, the leader attempts to reduce this psychological distance as much as possible, thus giving up the power distance. As a result, the employee can feel indebted, which increases their normative commitment (Huning et al., 2020).

Normative commitment is one of the three most common employee commitment types for staying with a job. This concept suggests that an employee will stay with a company if they believe they should for a reason beyond monetary compensation or positive associations with the job position they currently hold. Additionally, the concept of trust plays a significant role. There are two main types of trust: affective trust and cognitive trust. Cognitive trust is when someone trusts another person based on their abilities or experience; affective trust is based on how someone feels toward another person (Hale & Fields, 2007). Effective trust is increased when an individual utilizes the SLM and is the leading proponent in team effectiveness (Coovert et al., 2017). Team effectiveness and trust both correlate to job satisfaction. As a result, trust is a factor in the framework of this study.

Job satisfaction is a set of attitudes that describe an individual's relationship with their job. There are three major job satisfaction components: (a) evaluative satisfaction, (b) cognitive satisfaction, and (c) affective satisfaction (Spector, 1997). These three attitudes are measured individually to understand a person's holistic concept of job

satisfaction. All three of these components are influenced by an individual's home life and personal well-being (Al-Ali et al., 2019). As a result, a job satisfaction survey can measure an individual's feelings about their job and their feelings about their overall work–life balance, along with their physical and mental well-being.

The nature of leadership is to create a professional working relationship where an employee can achieve and become more productive in the workplace. To utilize social exchange theory in the SLM, the leader starts by extending the first olive branch to develop trust and rapport, assisting the employee by removing roadblocks and promoting well-being. As a result, the power distance reduces, and an employee can increase their feelings of job satisfaction because they are being supported by leadership in the aspects of job satisfaction, versus other leadership models that focus on the company culture impacting job satisfaction and the leadership having a more indirect approach (Al-Ali et al., 2019). By having a direct approach, the social exchange theory concept creates a stronger working relationship between employee and leader, which leads to improved performance for the company and more opportunity for growth for the employee.

Research has shown that industry and organizational structures have an impact on how the SLM is perceived and its overall effects (Eva et al., 2019). Some of these organizational structures include hierarchical structures, matrix structures, divisional and multidivisional structures in which there are larger teams, subteams, or no teams (Eva et al., 2019). Some industries that have been studied include the hospitality industry, such as hotels; transportation industries, including airports; academic industries, which include colleges; and military structures, including the Department of Defense (Eva et al., 2019).

All these environments have unique variables that have played a role in the effectiveness of the SLM. Manufacturing has additional unique variables that may or may not impact how the SLM interacts with job satisfaction. Some of these variables include higher turnover rate, expectations of transactional leadership, less sense of belonging in a company or to a team, less interaction with clients or the public, less sense of obligation or responsibility, less interaction with one's leader or boss, and employees' perceptions of how their job affects the good of their community. All these extraneous variables are present in a manufacturing environment and will likely have a unique impact on the SLM's relationship with job satisfaction (Greenberg, 2011).

Nature of the Study

The study is quantitative; the SLM is compared to overall job satisfaction in a manufacturing environment. Nathan Eva et al. (2019) illustrated how to conduct research studies involving servant leadership. This is needed because numerous definitions and measurements of servant leadership have been created without uniformity. Nathan Eva et al. showed which definitions and measurements are most in alignment with the original model published by Greenleaf.

The data source is companies from varying industries and organizational types. Both categorical variables lack research into their effects on the SLM and its impact on job satisfaction. Companies were contacted via email to participate in the study. If they wanted to participate, they were given an informed consent detailing the study's contents and protocol for completing the surveys and questionnaire. All identifiable information

was removed before data analysis took place. This ensured the anonymity of the participants and companies involved.

The assessment used to measure the SLM was the SL-7. The SL-7 is a seven-question survey with a seven-point Likert scale given to employees to rate their direct report. This survey was adapted from the SL-28, which is a similar 28-question survey. Liden et al. (2015) created both surveys utilizing the key concepts from Greenleaf's original definition and the most researched and used definitions, encompassing both the perceived thought processes and behaviors of leaders. Originally, SL-28 was created and found to be valid; additionally, researchers noted there has been a particular increase in the validity of seven of the items. This finding could be used to reduce the number of questions on the test and thus increase the probability of individuals completing the questionnaire reliably. The SL-7 was found to be a valid and reliable measure of over .8. As noted earlier, the overarching meta-analysis showed that the SL-7 is one of the most successful questionnaires for servant leadership. The SL-7 focuses on employees' perceptions of their leaders' use of the SLM (Linden et al., 2015). This is a key factor because the SLM focuses on social exchange theory and social modeling theory, which concentrate on employees' perceptions versus leaders' actual behavior. Without a successful perception from the employee, the SLM loses key fundamental elements that make it far less successful, and this fluctuation will show up on the SL-7.

To most accurately measure the job satisfaction felt by employees, the JSS was used. The JSS is a 36-item self-survey with nine subscales detailing each component of job satisfaction. The questions are formatted in a five-point Likert scale. The JSS was

developed by Paul Spector and is free to be used in research, with the caveat that the research data must be supplied back to the organization that created the JSS so it can refine and hone its validity and reliability (Spector, 1985). As a result, it is one of the most reliable and valid job satisfaction surveys for research. The JSS reports that its reliability ranges with its factors, which are from 0.61 to .90 reliability coefficient.

Job satisfaction is the concept most closely tied to employee retention and employee performance (Spector, 1997). Additionally, job satisfaction can assist in positive company culture, which can generate camaraderie and synergy among employees. The JSS was used for this research; the JSS is supported by a significant amount of research across many different industries (Spector,1997). Because this research study was focused on variations across industries, the JSS has a standardized baseline for these industries that allows research to be compared to nationwide baselines. These baselines can lend a researcher's findings greater generalizability.

The data sources included one local manufacturer and data from SurveyMonkey's target audience service. For the local manufacturer, the head of the human resources department was contacted, and they were given an email invitation to send to their employees. The invitations had a link that took employees to an online survey. Once the survey was completed, that data were saved to an account that only I had access to. The data gathered from SurveyMonkey were anonymous and only I have access to the data. All the data are stored on my computer, which has two layers of password protection.

The email invitation requested that each employee with a direct report fill out both the JSS and the SL-7. This is because both surveys focus on employees' perceptions

of their leader and the workplace as well as their overall feelings and attitudes about the workplace. This allowed each employee to be measured against every other employee, creating far more data points and data clusters. An employee's actual position inside the manufacturing facility is essentially irrelevant because the environment is the categorical factor that creates a difference in outcome between job satisfaction and perceived servant leadership.

In addition to the surveys, basic demographic information such as gender, age, and ethnicity was taken. No other identifiable information, such as name or job title, was taken. To further maintain confidentiality and anonymity, SurveyMonkey was used by the participants to fill out the surveys in a confidential space. This ensured that the manufacturer and researcher did not know who filled out the survey and when. A link was sent to the manufacturer's leadership, which was then disseminated to employees who would like to participate in the study. No participant was required to participate nor given rewards for completion.

Definitions

This section will give a brief definition for the main terms used in this chapter and preceding chapters.

Job satisfaction: A set of attitudes an employee has toward their job.

JSS: A self-survey where an employee answers questions based on their attitudes and beliefs about their work and their job environment.

Manufacturing environment: An industrial operation that fabricates or constructs products.

Servant leadership model (SLM): A leadership style that focuses on employee improvement using the leader's ability to support the employee through servitude.

SL-7: A survey that has seven questions on a Likert scale where employees evaluate their direct supervisor or manager.

Social problem: An issue that permeates negativity or difficulty through communities and populations.

Assumptions

One of the assumptions of this research was that the individuals in a leadership position would possess and exhibit some aspects of the SLM to varying degrees without explicit knowledge of SLM. This assumption has held for most of the research that has been done until this point (Eva et al., 2019). Additionally, I assumed that study participants would answer the survey truthfully and honestly. Generating anonymity and creating a sense of safety during the survey increases the likelihood that participants are truthful and honest, thus providing accurate testing data (Babbie, 2017).

Scope and Delimitations

The three main elements of the study are the SLM, job satisfaction, and the manufacturing environment. The reason for the limited scope is that servant leadership has been studied as it pertains to job satisfaction; however, it has never been studied in a manufacturing environment, which can further understanding of its relationship (McNabb, 2020). The included concepts are the SLM, job satisfaction as it is measured in the JSS, social exchange theory, and social learning theory as conceptual principles.

The concept of leadership and leadership's influence on subordinates is complex; however, the scope of this study limited itself by not addressing concepts that are not considered directly related to the SLM. Some of these concepts include over-justification theory, motivation theory, and/or employee turnover. While all these concepts are linked to both job satisfaction and servant leadership, they do not further the understanding of the research question.

Limitations

One of the ongoing limitations of the SLM is that all the different moderator variables that could exist have not yet been researched. In many of the articles utilized for this research, authors have stated there are many different complex moderators that could be taking place on an individual level or on a macro level. Further research must be done on this model to identify extraneous variables and moderator variables.

One limitation of the study is that the SLM works off the social exchange theory model. As demonstrated by Lu et al. (2019), social exchange theory varies based on cultural customs. While social exchange theory is a fundamental part of relationship building in most cultures, it varies based on the obligation of the recipient to return in kind. This means that the normative commitment that is often found in servant leadership may not be effective across cultures. Because this research was focused primarily on Western cultures, there may or may not be a cross-cultural generality that can be applied to job satisfaction and/or turnover rate.

One of the limitations and criticisms of the JSS is that an individual's feelings about their job can change over time, and these changes are not always relevant to the job

environment or the leadership (Spector, 1997). For example, an individual could become less and less satisfied with their job because of a chronic injury that makes them less and less satisfied with the world in general. The subcategories do not necessarily pick up these trends over time; however, they negatively affect an employee's attitude toward the workplace. An additional consideration would be an individual's job satisfaction as unique circumstances happen in their life, such as marriage, buying a new home, or receiving a promotion. All these are not directly discussed on the JSS and will nevertheless have a significant impact on its measurement. The literature suggests that, generally, these kinds of events are rare, and with a large enough sample size, they become less influential on the overall data (Spector, 1997).

Significance

This research focuses on the SLM and expanding the field's ability to properly utilize it in different organizational settings. The SLM has been shown to increase job satisfaction in employees when utilized properly (Pekmezci et al., 2017). An increase in job satisfaction is correlated with positive social changes in two regards. The first is that individuals who have higher job satisfaction tend to be happier in their everyday lives, which increases pro-social attitudes. Pro-social attitudes in a community decrease the likelihood of negative interactions among societal members (Aboramadan et al., 2022). A happier community works collaboratively and has fewer negative interactions. Second, high levels of job satisfaction, especially under the leadership of an SLM, increase the creativity of the employees involved. Increased creativity allows for higher-level innovation, which can create a competitive edge inside the company and can also help

progress in the industry. This increases overall sustainability through innovation. The SLM, if used appropriately, could assist in these kinds of innovations.

In addition, the workforce is aging as a population, increasing their health risks as they pertain to work stress. Manufacturing facilities tend to have higher work stress due to long hours and odd schedules. It is vitally important that psychological stress and physical stress be addressed in the manufacturing industry to decrease physical and mental health concerns in this population (Yang et al., 2019).

Summary

This chapter demonstrated the overall importance for the SLM to be studied in the manufacturing environment with regards to job satisfaction. In this chapter, I discussed the social implications as well as the potential significance of findings. Chapter 2 will demonstrate an in-depth look at what has been researched with regards to the SLM and job satisfaction as well as the overall need for manufacturing environments to institute new leadership styles.

Chapter 2: Literature Review

Introduction

This literature review was designed to demonstrate the purpose and necessity for research into how the SLM affects job satisfaction in manufacturing environments. Eva et al. (2019) called for further research and noted that the SLM has been anecdotally used for a long time and there has also been a drift from its original definition and proper use. The author noted that, in some research, the definition of servant leadership changed so much that the research conducted is not usable for further understanding of the SLM. As a result, the authors describe the proper definition as well as the appropriate assessments for quantitative use. Additionally, they note that most research on the SLM has been conducted for service industries. Hamid et al. (2022) suggested agencies and other industrial-type work may also significantly benefit from the SLM; however, there is a significant lack of research in these areas. Hamid al el. (2022) found that the SLM can positively affect employee engagement outside of service industries. Manufacturing environments have a tendency not to be researched regarding servant leadership. This may be because manufacturing environments, especially low-level manufacturing workers, have an industry standard of high turnover. Often, training a new factory worker does not take much time, and the turnover rate is not necessarily expensive and therefore is only addressed when it becomes a significant issue. With low job satisfaction, a high turnover rate can be expected.

Schulker (2017) demonstrated that the manufacturing industry has a significantly different relationship with the SLM than other industries. The research has shown no

direct connection between the SLM and positivity toward change management. Schulker (2017) suggested that a broader measurement of employee motivation and satisfaction should be used to determine the level or type of benefits the SLM could have in manufacturing environments. One of the major drawbacks of turnover that is often overlooked is that when individuals remain employed at a company for long periods of time, they become adept at many operations of the company and can become more valuable. Even though a high turnover rate does not affect the bottom line in the moment, it will likely affect the company's future ability to grow and expand as well as become crisis resistant. Widarmanti et al. (2021) demonstrated that with lower employee turnover a company is more likely to hold profitability during expansion or crisis and that job satisfaction is directly correlated to employee retention in manufacturing environments.

The SLM can positively affect job satisfaction in many different environments, and having a positive influence on the manufacturing environment could potentially change the standards of this industry. Additionally, having low job satisfaction lends itself to psychological distress, and perpetuating psychological distress within a company can lead to absenteeism and burnout. Psychological distress can lead to mental health disorders such as anxiety and depression when not addressed. Yang et al. (2019) showed the significant health and psychological impact felt by older employees in stressful work environments. Yang et al. showed that job satisfaction is directly linked inversely to the amount of stress an individual feels, which leads to mental health and physical health concerns. Yang et al. (2019) called for future research into how to address job stress and job satisfaction. Simply put, just because it is easy to replace an employee does not mean

that low job satisfaction goes without consequences. This is further evidence to support that instituting a leadership model that can benefit job satisfaction can also benefit the social issue of mental health.

Literature Search Strategy

The primary databases searched included EBSCO, ProQuest, Google Scholar, Walden University library, and Research Rabbit. The key phrases used were *servant leadership, job satisfaction, JSS, manufacturing, servant leadership in manufacturing, job satisfaction, SL-7,* and *SL-28*. Most articles were found using the *cited by* function from both Google Scholar and Research Rabbit. Specifically, this process was used for the SL-7, the JSS, and the meta-analysis of servant leadership.

Theoretical Foundation

There are two theoretical frameworks that account for the SLM's success. Those two frameworks are social learning theory and social exchange theory. Research into the SLM has shown that social learning theory and social exchange theory can play equal parts in their effectiveness with employees (Madison & Eva, 2019). However, it is unclear to what extent each factor plays in different environments and different business cultures. As a result, it is suggested that both frameworks be used when investigating unique environments. This will ensure a maximal comprehension of servant leadership's effect in the context it is being studied (Madison & Eva, 2019).

Social Learning Theory

Albert Bandura first created the concept of social learning theory in 1977 to explain a series of findings on how humans learn from one another without directly

interacting. Bandura's famed Bobo doll experiment in 1961 found that children imitate behavior they see, even without being told to do so or even when rewarded for the behavior. Social learning is an essential extension of the theory and model of operant conditioning, where rewards and punishment are necessary for behavior to develop and be sustained. When no reward or punishment is present, behavior is randomized, and if someone can see a model behavior, their behavior will become less randomized and model what is being observed (Bandura, 1986).

Research has shown that modeling behavior can happen in most environments if there is no significant roadblock (Madison & Eva, 2019). Research published in 2022 demonstrated that when a high-ranking member of an organization utilizes servant leadership, other managers and supervisors will begin utilizing a similar methodology, even without explanation or reward (Kauppila, et al., 2022). Kauppila et al. (2022) showed that as the managers and supervisors adopt the new servant leadership style, the positive effects on job satisfaction and employee commitment also increase. As a result, company culture improves, which provides positive reinforcement for the servant leadership style, which perpetuates the use of the style without the leader's direct influence. The findings demonstrated that social learning theory is one of the primary methods by which servant leadership trains and teaches new leaders, and it also affects company culture.

The consequences of a behavior are a factor in how it is repeated or not and punished behaviors can be repeated; however, they are less likely (HongDan & LiMin, 2019). In a study published in 2019, researchers demonstrated that the SLM will not have

social learning qualities if the manager displays hostility or abuse towards employees or subordinates (HongDan & LiMin, 2019). This finding further demonstrates the connectivity between social learning theory and the SLM in that the modeling behavior is not replicated when there is punishing behavior present or a lack of connectivity between the employee and supervisor. Trust and positive relationships are only two factors of the SLM, and other characteristics can be present; however, they are far less effective due to the ongoing negative exchanges between the servant leader and the employee (HongDan & LiMin, 2019). Additionally, further research shows that behavior to be modeled or produced once does not need to be reinforced; however, repeated behavior must be reinforced if the behavior is to be repeated (Wu et al., 2020).

Research published in 1986 extended social learning theory and transformed it into social cognitive theory. Social cognitive theory explains the essential cognitive component of more complex behaviors and thought processes (Bandura, 1986). Because processes cannot be observed, the individual can only learn through behavior to a certain point and then will need to develop and learn cognitive processes to generate new behaviors or to explain why the behaviors they are using are effective or need to be perpetuated. Social learning theory explains passive learning, and the social cognitive theory explains active learning processes.

Research showed that a few of the major characteristics of the servant leader, including emotional healing, were directly linked to this extension of social learning theory. A study published in 2019 demonstrated that when an employee is engaging in emotional labor, the context for deeper trust and deeper effectiveness is present and the

servant leader can have a deeper emotional connection by utilizing cognitive communication (Lu et al., 2019). In this communication style a servant leader would utilize the components of social cognitive theory and discuss their thought processes and theories with subordinates. Clear communication would increase many different levels of trust, including effective trust and allowing surface actions to have a more profound impact on the employee. This deeper impact would not just affect job satisfaction but also improve an employee's relationship with other coworkers through modeling behavior (Lu et al., 2019).

When a thought process and the reason were communicated as to why a behavior was being conducted while the participant was observing, the observer was far more likely to repeat the behavior accurately and continue to repeat the behavior even if minimally reinforced. Positive reinforcement is closely linked to social exchange theory, whereas, when the positive exchanges continue, there is more likely to be repeated behavior (Madison & Eva, 2019). When an employee perceives that the servant leader is giving to them, they are more likely to give back to the leader and create positive reciprocity, which generates repeated accumulative behavior (Sawan et al., 2020). Much like operant conditioning, social exchange theory and social learning theory create a perpetual behavior that can later be sustained without reinforcement or influence (Sawan et al., 2020). This perpetuation generates a more positive business culture but also the possibility of new leaders who will then model the servant leadership style and perpetuate the positive business culture.

Research has indicated that self-efficacy can play a significant role in whether an individual engages in observed behavior (Clark, 2019). If an individual feels they are unable to complete the behavior successfully, they are far less likely to try to attempt the behavior; however, if they feel they are likely to complete the behavior being observed, then they have an increased likelihood of attempting the behavior. This can be further influenced by communication about how the behaviors are conducted and why they are conducted. Wu et al. (2020) demonstrated that the social learning theory context, which includes self-efficacy and self-interest, is observed when the SLM is being used. Researchers concluded that when there is a higher level of connection between the servant leader and the subordinate, the subordinate identifies and models the behavior of the leader (Wu et al., 2020). In the context of social learning theory, this has to do with an individual's goal of rational self-interest, by which an individual will act more like somebody they respect and trust because it will help them gain favor later. This is a largely subconscious process; however, it is clearly present as a cornerstone of servant leadership effectiveness (Wu et al., 2020). Additionally, self-efficacy is a moderator variable; if an individual does not see themselves as a leader, then they are far less likely to engage in this behavior regardless of how close they feel to the servant leader. If a servant leader wants to enhance an employee's leadership ability, they must discuss with them that they view them as a leader and give them self-confidence and efficacy to attempt leadership behaviors. This finding is also supported by research into social cognitive theory (Bandura, 1986).

Social learning theory is an essential part of how a servant leader creates new leaders. The SLM does not emphasize the creation of new leaders, but rather the maximization of an individual's potential. When an individual wants to become a leader, they will often act like the leader themselves, thus creating a culture of positivity but also indicating that a part of the individual's potential is to become a new leader. The SLM suggests that when this behavior is shown, the leader should explain specific servant leadership thought processes and behaviors to engage in a higher level of learning. This activates not only social learning theory, which can create a better culture, but also social cognitive theory, which can create and cultivate new productive servant leaders (Eva et al., 2019).

Social learning theory is the concept by which an individual models behavior they see from others. Social learning theory is more potent when an individual is seen as an expert or authority (Alasadi et al., 2019). This was first discovered in children as their primary learning method; however, it was shown to be a very effective learning method for adults. In addition, social learning works on a subconscious level, where people can adopt the behavior of those around them without conscious awareness.

Social Exchange Theory

Social exchange theory is where an individual feels indebted to another when that person acts in an altruistic way. The SLM focuses on servitude, which can be perceived as an altruistic benefit to an employee, which then makes them feel indebted to the leader.

Social exchange theory was first published in 1958 by George C. Homans to explain why individuals interact with one another and the way that they do. He discussed how altruistic behavior could have a reciprocal purpose of creating positive relationships and benefit a larger community. Additionally, he pointed out the concept that altruistic behavior can serve a significant, influential purpose (Homans, 1958). As social exchange theory developed, it was applied in situations in which the social reciprocity of giving or altruism took place and in situations it did not take place. As a result, social exchange theory identifies key components that, if present, suggest that an altruistic exchange will take place; however, when not present, no such behavior will take place, thus not establishing a positive relationship (Homans, 1958). This finding is significant in the SLM because it illustrates in what environments and situations servant leadership will work and what situations it will not work.

Social exchange theory focuses on a cost-benefit analysis where the social exchange must be relatively balanced for social exchanges or services to one another to continue (Homans, 1958). The exchange does not have to be monetary or acts of service but rather could be an improved sense of belonging or power in the environment (Liao & Zhu, 2021). For example, a servant leader may allow an employee to modify their operating space as they see fit, which increases the employee's sense of belonging and autonomy in the environment. In this example, the exchanges given to the employee puts the employee in the debt of the servant leader. As a result, the employee will attempt to balance the equation in some way to benefit the leader or the company. However, this reciprocal interaction is highly based on the individual's expectation of reciprocity; if

there is no trust that servitude or beneficial behaviors will be rewarded, then they will be far less likely to happen. As a result, perceived reciprocity is directly tied to the perceived relationship and effective trust between the employee and the servant leader (Liao & Zhu, 2021).

The SLM focuses on trust in the relationship between the servant and the employee. Some research suggests that this is because the quality of the relationship and the employee's relationship to their work is a significant moderator variable to how well social exchange theory can function in an environment, which is one of the driving factors behind an employee engaging in innovative behaviors (Wang et al., 2019). One of the major functions of the social exchange theory is the expectations and comparisons between oneself and others, and, as a result, one of the foremost expectations between the servant leader and the employee is that their working relationship is strong and reciprocal. Without a positive reciprocal relationship being present, there is a significant decline in innovative behaviors and positive outcomes (Wang et al., 2019). It is important to note that the balance of social exchange theory focuses on the perception that individuals may perceive that they deserve more in return for their efforts to maintain emotional or psychological balance. In these cases where an individual does not engage in reciprocity the social exchange theory does not generate a reciprocal balance of behaviors and affect, which often means the SLM will not work with this employee (Madison & Eva, 2019). However, these factors only present after what is known as the honeymoon phase. In the first three to six months, an individual who is receiving even small amounts of positive behaviors will likely give more positive behaviors in return to

test the limits and boundaries of altruism. During this period, there is an individual hesitancy not to keep score or focus on balance; however, after the honeymoon phase, this becomes crucial in order to maintain the SLM's effectiveness and equivalent social exchange (Ahmad et al., 2021).

When applying the SLM to social exchange theory, one important piece is habituation. Habituation is where an employee becomes accustomed to the servant leader removing certain roadblocks or engaging in certain behaviors. If habituation occurs, the employee does not see that the servant leader is engaging in a specific altruistic behavior but rather their job and therefore does not engage in social exchange (Malingumu et al., 2016). It is essential for the servant leader to engage in altruistic behaviors only temporarily to remove roadblocks or to assist in specific job criteria, but then remove themselves after said roadblock is removed. This will not only allow the individual employee to grow on their own but also decrease the likelihood of habituation. If the servant leader is effective in creating a servant leadership team, then member exchange between the team will act as the servant leaders to one another, generating more positive interactions between employees and generating an increase in overall organizational citizenship behavior (Malingumu et al., 2016). Because these team members are not acting within their job criteria by assisting one another, habituation is far less likely to occur, and the leader is far less required to intervene. When done properly, the social exchange between the servant leader and the employee can extend to a company culture which then becomes self-perpetuating and large-scale benefits can occur.

Literature Review Related to Key Variables and/or Concepts

Robert K. Greenleaf was the first individual to detail how the components of leadership can be demonstrated through the service of subordinates. He published the foundation for many components and characteristics that would later generate the SLM (Greenleaf, 1977). In an interview, Greenleaf reported that he got the inspiration to generate the SLM based on the book *Journey to the East* (1932) in which the leader did not view himself as a leader but rather as a servant and was able to model behavior that others imitated. As a result, the main character was viewed as a leader. He then discovered that throughout history, some of the most influential leaders focused not on themselves but on their subordinates and were able to empower and support their subordinates to the point where they became great leaders. In Greenleaf's book *The Servant as a Leader* (1970), he describes situations and characteristics that would characterize a servant-leader, such as a willingness to serve from an authentic place of empowerment. The book itself does not discuss specific enumerated characteristics, but rather an overall mindset and concepts a servant leader must possess to be successful.

Characteristics of the Servant Leadership Model

Larry Spears, a student of Greenleaf, comprised a set of 10 characteristics based on Greenleaf's book to summarize the key components that a servant leader should adopt and improve to be a more successful servant leader. These traits are empathy, listening, healing, awareness, persuasion, conceptualization, foresight, stewardship, commitment to the growth of people, and building community. These characteristics are represented in

the 2020 article “How do I become a servant leader? A practitioner’s approach to servant leadership development” (Gupta & Nambudiri, 2022).

The concept of “empathy” refers to the servant leader sharing the emotions of their subordinates and, in addition, learning the subordinate’s strengths and weaknesses to assist the subordinate in becoming the best person they can be. While empathy can be a natural part of communication, it is recommended that servant leaders learn and practice empathy exercises to better understand the emotional world of others.

The concept of listening refers to the time, effort, and focus that servant leadership gives to hearing subordinates in a holistic way, i.e., reading between the lines and understanding the subordinate’s syntax. It is important for many servant leaders to utilize a listening style, such as active listening. Later in the development of a servant leader, it is shown to be highly important for the servant leader not just to listen but also to make subordinates feel heard and understood. Listening utilizes the key component of trust that fuels the leadership dynamic (Coovert et al., 2017).

The healing concept refers to two different components of the workplace. The first is to eliminate toxicity from the work environment for psychological health and to make safety the priority. The second is to create a work–life balance that is sustainable. The healing part emphasizes psychological healing through the workplace, but also the employee’s ability to heal outside of work, which is why work–life balance is a factor in this part. How to accomplish this varies greatly from job to job and environment to environment.

The concept of awareness or self-awareness is where the servant leader understands their impact on their subordinates and understands their own strengths and weaknesses. Part of the SLM is leading by example, and so using interventions and strategies to address one's own strengths and weaknesses promotes subordinates to do the same. Additional studies show that advanced self-awareness creates a level of humility that makes the leader more relatable to the subordinates, which creates more trust and camaraderie (Wu et al., 2020). Persuasion focuses more on collaboration than it does on direct influence. In the SLM, persuasion involves having team members of differing opinions come together and work in harmony. This is also useful when large-scale changes must be made that are unpopular, and the leader would influence the team to do their best without resorting to a negative attitude.

The characteristic of conceptualization is one of the most leadership models have where the leader must grasp the micro-day-to-day operations and the macro larger goals of the company in the industry and environment of the company. In the SLM, conceptualization refers to the leader and their ability to communicate to the subordinate. This type of communication is not to say that there are no secrets and full transparency, but rather the overarching goals of the company are clearly communicated to the employee.

Foresight refers to a leader's ability to predict future events and make present decisions based on what is best for the company in the moment and in the future. Foresight has to do with setting goals, both micro and macro, as well as having a strong understanding of current and future environmental factors facing the company.

Additionally, personality interactions and business culture must be considered when making decisions about staffing and staffing placement.

Stewardship refers to the level of responsibility that the leader takes. Currently, this is referred to as extreme ownership or radical accountability. The servant leader takes responsibility for their entire team and all the team's behaviors. It is not to say that the servant leader takes the blame; however, they understand their role in supporting and growing the team and that a lack of performance is addressed through leadership and training, not punishment. A common side effect of high-level stewardship is that employees are more likely to admit their mistakes and learn from them because they know that the leader will not give harsh punitive action. It is not to say that a servant leader will not fire an employee; however, there is a level of clarity and training associated with mistakes.

The concept of commitment is where the servant leader focuses on helping subordinates become the best person they can possibly be. Servant leadership is unique as a leadership style where most leaders help the employee become a better employee. In contrast, the SLM focuses on the employee's employment and personal goals as well as overall industry professional goals. The servant leader often will support an employee in taking a personal growth route that may lead them away from the company they are in. This is one of the major criticisms of the SLM in that the leader supports the employee so much that they become more valuable to other companies and will move on. Initially, when individuals practice servant leadership, it is not uncommon for the turnover rate to temporarily increase, which makes this model risky to long-established companies.

The characteristic of building one's community has to do with the overarching value system of the servant leader, where the servant leader tries to promote an individual's well-being as well as well-being in the company's community. Often, a servant leader will volunteer or incentivize team members to volunteer in community works that may or may not have any bearing on the company's overall goals. Incentivizing in this way can create a business culture of caring and giving, which establishes closer camaraderie and trust between teammates (Spector, 1997). Additionally, strong ties to the community can have exponential results when growth occurs or when crises occur in smaller companies.

Figure 1

Servant Leadership Qualities

Figure 1 shows the 10 characteristics of the SLM. Listening is where the employee feels heard and valued. Empathy is where the employee feels that the leader understands and feels their emotions. Healing is when the employee feels that their relationship to the leader is so secure that their past negative interactions with others can be resolved. Awareness is when the leader has a high level of self-awareness and gives the leader insight into how to handle problems involving relationship dynamics. Persuasion is the concept in which the leader can sway others in a way that does not feel controlling or demanding. Conceptualization is the SLM characteristics where a leader

can see the organization from multiple perspectives such as day to day and big picture. Foresight is where the leader can understand future situations and plan for them ahead of time. Stewardship is a characteristic the is related to the level of trust the follower has for the leader. Commitment to the growth of people is where the leader focuses on the follower's growth wherever it may lead the follower. This characteristic is the one that the SLM is most criticized for because the leader will help and employee leave if that is best path of growth for the follower. This increases turnover rate in the short term. Building community is where a servant leader will support followers to engage with the community in a positive way such as volunteer work.

This is the complete model however the measure being used combines a few of the components because they have similar psychological constructs. As a result, the SL-7 will focus on seven characteristics for this research: emotional healing, creating value for the community, conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, and behaving ethically.

Assessments for the Servant Leadership Model

The first assessment for the SLM was called the SERV*OR, which stood for servant orientation. The assessment gave the first theoretical model for servant leadership; it was assumed that individuals need to possess characteristics of a servant leader for them to successfully utilize the style, and individuals who fulfill those characteristics would naturally tend toward a servant leadership style.

As cited by Khan et al. (2021), the SERV*OR was created with the intention of looking at the thought processes and behaviors that would be more likely associated with

someone who is service-focused. This was one of the first times that the SLM could be studied quantitatively and measured against other variables. The assessment is still used today; however, it is less linked directly to service leadership and more directly related to how an individual perceives themselves in the service of others. One of the fundamental constructs of a service orientation is how well they can serve others, whereas a servant leader focuses on improving others through service. While it is a small distinction, it is critical for allowing a leader to maintain authority in a power dynamic while also assisting and serving others. The benefit of this measurement is that it gave visibility to the SLM; however, the drawback is that it suddenly changed the definition of a servant leader. This will limit confusion about the true definition of servant leadership in some research, which means that not all research that was conducted on the SLM holds the same definitions and, therefore, may lack consistency and generalizability. As discussed by Eva et al. (2019), all research moving forward must use measurements that coincide with the original definition of servant leadership. As a result, the assessment used in the proposed research is the SL-7, which measures seven key fundamental characteristics of the SLM.

Servant Leadership-7

The shorter version of SL-28, also known as the SL-7, has been validated by research (Linden et al., 2015). The SL-7 only uses seven questions and combines the significant concepts of the SLM while maintaining the unique aspects and concepts. The subscales are broken up into emotional healing, creating value for the community, concept skills, empowering, helping subordinates grow and succeed, putting subordinates

first, and behaving ethically. Due to the SL-7's short length and combination of key concepts, it is widely regarded as one of the more successful research measurements for a quantitative study on servant leadership. The study suggested that the SL-7 is highly beneficial for research because each of the seven components can be measured independently as well as conjointly (Canavesi & Minielli, 2021). This allows for more opportunity to understand how the SLM is affecting the environment as being utilized. The SL-7 is often paired with other quantitative measures such as the JSS or the employee engagement survey. When the SL-7 is combined with other quantitative measures with subscales, the research can be far more complex when analyzing and comparing data.

Ekinci (2015) utilized teachers as a foundational basis to create a measure that would assess the level of servant leadership thinking and behavior. It was argued that the ideal servant leader would be a teacher and, therefore, educational teachers were most likely to fulfill the criteria and be a successful baseline. The data showed that the assessment was successful in creating validity and reliability; however, Ekinci (2015) did not use the ten dimensions laid out in the original SLM and only used five instead. The five dimensions that were left out focused on teamwork, camaraderie, such as listening, and stewardship. As a result, many studies utilized this measure to expand servant leadership research; however, it is not necessarily valid because it does not utilize the core definition. Many such instances as this have taken place over the last 20 years.

Iarocci (2017) discussed three major priorities for the servant leader, three major principles of the servant leader, and three effective practices for the servant leader. He

compiled these elements based on how the other servant leaders responded in their behaviors and how they grew as people. He attempted to keep the definition of the servant leader and create multiple trainings designed to augment thought processes and behaviors to become more effective servant leaders. This training offered a framework for which individuals could grow into becoming servant leaders and offered coaches and consultants a framework with which to teach servant leadership. This was an important milestone in the evolution of servant leadership because, up until this point, there had been no unified training framework. Most often, researchers used measures to test a leader's current use of the SLM, and most trainers would focus on developing measurable characteristics based on a measure. This method did not show consistent outcomes. Using this framework enabled leaders to understand and use the SLM in a more efficient and successful way.

How Servant Leadership is Taught and Used

The three main key priorities are developing people, building a trusting team, and archiving results. Developing people is a core concept in the servant leader model where the leader does not just develop an employee to become a better employee but rather develops the employee to become a better person holistically (Khan, et al., 2021). Making this a priority puts the individual employee at a higher priority in the company.

Building a trusting team as a priority means that the servant leader will sometimes be clearer and more upfront about business challenges or their own life. This level of transparency can make the leader vulnerable to criticism; however, there are methods to create trust without self-disclosure. For example, social exchange theory suggests that if

the leader does something kind for the employee, then the employee will want to do something kind for the leader. By allowing a positive exchange of support, trust can be built while the leader maintains personal boundaries, as well as company secrets. For a leader to maintain their position and be successful, there must be a level of distance between the employee and the higher-level stress that the leader feels from the company's overall operations. When building trust, this should always be a consideration.

The servant leadership priority of achieving results has to do with the development of the servant leader. The scrutiny that the servant leader gives himself allows for introspection to better themselves in the service of becoming a better servant leader (Clark, 2019). The achieving results portion is not about achieving a bottom line but rather achieving the results that a servant leader needs to prioritize, such as building trust, empathizing, and developing listening skills.

The three key principles are service first, persuasion, and empowerment. These principles are laid out as a summarized definition of the SLM by Greenleaf (1970). They are designed to focus on the major defining aspects that most other leadership styles do not utilize or have difficulty utilizing. The three key principles extend the framework of the training model to allow other leadership styles to change and become more servant leadership oriented.

Three key practices are listening, delegating, and connecting followers to missions. These key practices are designed as goals and behaviors for the servant leadership to measure themselves against. For example, is the leader delegating tasks that will allow the employee to grow as a person? These types of reflections will allow the

servant leader to continue building their skills within the framework of the servant leader and address behaviors that are not in accordance with the SLM.

Job Satisfaction

Job satisfaction is a set of attitudes an employee has about their workplace and their specific job. There are many factors that go into job satisfaction that are both internal and external. Research into job satisfaction has attempted to measure job satisfaction successfully and devise a framework that can be beneficial to companies to increase job satisfaction. An increase in job satisfaction is linked to many positive benefits for a company, such as employee retention and increased productivity. Additionally, higher job satisfaction is linked with lower mental health and physical health risks. More recently, job satisfaction has been a more integral part of a company since the younger generation will quickly leave a job if job satisfaction is not achieved (Viljoen, 2019). Additionally, a high level of reported job satisfaction can make a company more desirable even if they provide fewer rewards, such as lower pay. This emphasis on job satisfaction makes research into improving job satisfaction through leadership integral moving forward.

In this study, job satisfaction is used as an outcome of servant leadership in manufacturing. The reason that job satisfaction was chosen over other measures is that job satisfaction contains many different components and is more likely to yield significant results in a more specialized attitude or category. Some research has shown that the SLM does not have a significant impact on worker engagement, which is a subcategory of an outcome of job satisfaction (Huning et al., 2020). This then begs the

question of whether job satisfaction is affected by the SLM in manufacturing. If not, then future research can look elsewhere for how to improve job satisfaction; whereas, if there are significant findings in job satisfaction, then further research can be done to discern what specific areas are being influenced the most.

History of Job Satisfaction

Kornhauser (2015) offered one of the first instances where the foundation for job satisfaction was laid out. Kornhasuser (2015) argued that current efforts to improve productivity, reduction of accidents, and employee turnover lacked a key element, which is the individual's attitude about work. The author pointed out several different instances where an employee's attitude about their employer and job environment played a more impactful role in efforts to increase human efficiency than pay or other elements that have been tested. Kornhauser suggested that psychologists could be more useful in these situations because they are more adept at addressing and measuring attitude, which is needed (Al-Ali et al.,2019).

First Standardized Measure

Uhrbrock (1934) was the first to use a standardized measure to test employees' attitudes about their job. This was the first instance where job attitude was a topic of research and standardization. The test itself was a seven-point Likert scale that focused on a particular attitude of good or bad based on the assessment participants' perceptions of their work. The psychologist used a rudimentary attitude scale versus an industrialized scale and focused on a single-point attitude. Job satisfaction itself has many different components and theoretical concepts due to its high-level complexity beyond simple

perspective attitudes. This is not surprising because Uhrbrock discussed the one-sided nature of the employer, employee relationship and how its dynamic is not complex. This is true in transactional leadership models, which were the preferred model at the time this was published.

Adam's equity theory was a job motivation theory based on job satisfaction and how employers could improve satisfaction and motivation through a conceptual model (Al-Ali et al., 2019). This model posited that an employee's input must be equal to or less than the company's output to the employee. For example, if an employee is a hard worker, they will be expected to have equal to or greater than compensation for their work. The concept was created based on the theory that a motivated or satisfied employee will be more productive and have better retention over time. It is clear this model is an extension of the transactional leadership model that prevails in the area this is being researched. However, this did give rise to the concept that monetary output is not necessarily the only factor that improves employee satisfaction. For example, if an employee works hard, they can be given more money; however, they can also be given praise, group recognition, and additional responsibilities. This job satisfaction model begins to address the concept that people are more complex than previously thought and can be motivated in new ways. This is similar to Vroom's expectancy theory, which offers a more holistic understanding of the motivational process. Adam's equity theory poses a significant question of how best to motivate the employee and what they are expecting. The SLM suggests an active dialogue between the employer and employee so

that the boss or manager always understands the employee's expectations and motivations.

Equity theory has a few flaws with regards to how to motivate individuals. One individual's perception is not reality; as a result, the employer must find out the employee's perception and not expect the employer and employee to have the same reality (Spector, 1997). For example, if an employer gives a raise to the employee, the employer will be expecting that since the output is greater than the employee's input, then the employee will be satisfied; however, if an employee is expecting a particular output such as group praise, then the employee can feel slighted or undervalued. There are certain personality types that are highly entitled and will never feel that the employer is adequately rewarding them for their work regardless of the output by the employer. These individuals will never be satisfied but also may trigger others and feel dissatisfied by social comparison (Ahmad, et al., 2021). The belief is that everyone should be treated equally, while most people feel they should be treated with preferential treatment. The theory itself does not give a direct pathway to solve these problems; however, the SLM suggests that everyone should be treated uniquely to fulfill their own potential. This addresses the problem by offering individuals unique motivational opportunities that are difficult to compare to one another but are uniquely motivating to the individual who is receiving them. The major drawback of this is it requires the leader to have a deep intrinsic knowledge of the employee's motivating factors and be able to generate rewards and output in accordance with those factors. As a result, the SLM can directly address job

satisfaction and motivational factors that are utilized by other theoretical models such as equity theory.

The existing research makes clear that an analysis of how the SLM performs in a manufacturing environment is important and is necessary to advance the knowledge of how the servant leadership works and to gauge its usefulness (McNabb, 2020). The JSS is the most robust and broad job satisfaction data gathering tool that will allow for a unique and important understanding of servant leadership's effect on overall job satisfaction. As illustrated above, the characteristics of the SLM have varying impacts on overall job satisfaction; in any unique environment, such as manufacturing, it is safe to assume that the characteristics will need to be measured individually on job satisfaction to have a full understanding of servant leadership's impact. The research directly increases the understanding of the relationship between the characteristics of the SLM on job satisfaction and manufacturing environments.

Job Satisfaction Framework

Herzberg's Two-Factor Theory

Herzberg's theory of motivation, also known as the two-factor theory, states that job satisfaction does not sit on a single continuum but rather two separate continuums governed by unique, connected, and independent factors. He categorizes factors as hygiene factors, which are dissatisfaction, and motivating factors, which are satisfaction factors. The hygiene factors tend to focus on the individual's work environment, such as their relationship with coworkers, relationship with supervisors, salary, and overall feelings of job security (Chiat & Panatik, 2019). The motivating factors or satisfaction

factors tend to focus on the job itself, such as recognition, their sense of responsibility at work, their expectancy of advancement and growth, as well as how they view their work affecting the community positively. The two-factor theory stipulates that motivating factors tend to have the employee work harder and more diligently, whereas hygiene factors focus more on the employee's involvement with others and their overall job turnover intention. The theory stipulates that dissatisfaction should be addressed first and satisfaction should be addressed second as one builds on another. For example, if a leader feels employees are dissatisfied with their work and gives them more job responsibilities, also known as job enrichment, the employees may feel taken advantage of and feel even more dissatisfied versus more motivated. (Chiat & Panatik, 2019)

The reason this framework is essential is that the measurement used in the JSS has subscales that address both motivation factors and hygiene factors. While the JSS gives an overall scale of job satisfaction, the individual factors could be different from the use of the SLM and the manufacturing environment. This framework helps to accommodate some of the limitations of the JSS and addresses some of the possible extraneous variables that may be present.

Job Satisfaction Survey

The JSS is the method of measurement in this research for job satisfaction. While the JSS does create an overall total score, it utilizes many sub-scores that range from hygiene factors to motivating factors, also known as dissatisfaction or satisfaction. In this survey, these two factors are combined into one continuum where low job satisfaction would be the equivalent to dissatisfaction when compared to Herzberg's model (Chiat &

Panatik, 2019). Some of the subfactors directly address some of Vroom's categories of motivating rewards, such as pay or time off. There are nine separate categories of motivation addressed throughout to best encapsulate an individual's motivational desires. Since Vroom's model is more qualitative than quantitative, the JSS is the closest quantitative model that was found. The sub-factors include pay, promotion, supervision, benefits, contingent rewards, operations procedures, coworkers, nature of work, and communication. Each of these subcategories is given multiple questions to best encapsulate the overall employee satisfaction with these categories. The JSS research has shown that it has extremely high validity and utilizes several evidence-based models (Spector, 1997).

Viljoen (2019) demonstrated that use of the JSS is applicable to manufacturing environments. The research aimed at determining job satisfaction between different generations, with specific emphasis on millennials. The data showed that millennials have a much higher turnover rate when their job satisfaction is low, and as a result, job satisfaction will be increasingly important in the manufacturing environments in order to maintain employees. The research showed that millennials' tendency to focus on intrinsic satisfaction versus extrinsic satisfaction is not addressed by the traditional transactional leadership model. The JSS is uniquely qualified to use in quantitative research when studying job satisfaction and manufacturing companies because it accounts for several different variables that include internal and external factors as well as alignment with the two-factor model (Viljoen, 2019).

The JSS has also been used to measure servant leadership outcomes. The subcategories are not being utilized; however, the overall total is used. It is important to note each subcategory to fully understand the assessment taking place. The subcategories are pay, promotion, supervision, benefits, contingent rewards, operation procedures, co-works, nature of work, and communication. Each subcategory, as well as the overall total job satisfaction level, is based on an individual's subjective experience. For example, the pay subcategory is how the individual feels about their pay scale, which can have several variables, including their ability to pay for things outside of work, how individuals are being paid around them, and how other companies are paying their employees. Each of the subcategories has similar variables, and these attitudes can change based on external factors outside the company and internal factors within the company.

Alasadi et al. (2019) utilized the JSS and the SL 28 to determine how the SLM affected either intrinsic and or extrinsic job satisfaction. The researchers focused on the service industry, which has been shown to have the most positive and notable impact on the SLM. The researcher showed that both intrinsic and extrinsic job satisfaction were positively affected based on how present the servant leadership was (Alasadi et al., 2019).

The JSS has been used in a wide variety of environments and research topics. Its solid framework and broad use of job satisfaction attitudes allow it to be useful when studying simple or complex subject matter. Research conducted in 2022 used the JSS to determine the job satisfaction and motivating factors in job crafting (Junça-Silva et al., 2022). Job crafting is the tendency for an employee to modify how they go about completing tasks to either become more efficient or conserve energy. Research showed

that the individual's job crafting allows for an increased sense of meaningful work, which was measured by the JSS and demonstrated that an individual's level of meaningful work is also a moderator variable to determine whether job crafting takes place (Junça-Silva et al,.2022). Additionally, it was found that through job crafting, other elements of job satisfaction are also improved.

Manufacturing Environment

Research into manufacturing environments and their effect on the servant leadership relationship with job satisfaction are important for a variety of reasons. To better understand servant leadership, there must be an understanding of which environments it is most and least effective. The manufacturing environment is unique and different aspects that may work are counter to the effectiveness of servant leadership. One such study suggested that servant leadership does not have a significant impact on worker engagement; however, further research can be done on two precursors of work engagement, such as job satisfaction (Schulkers, 2017). This finding runs counter to most other findings about servant leadership in that it has a significantly positive relationship with worker engagement. Being able to improve worker engagement and overall job satisfaction in manufacturing environments is a way to increase employee morale and productivity and decrease employee turnover and absenteeism.

One of the unique environmental factors in any factory is that the employee has almost no contact with clients or stakeholders. Most research into the SLM has focused on industries where the employee has direct communication with either a customer, client, or stakeholder (Eva et al., 2019). The SLM puts the leader into a servitude role to

best assist the employee, which then offers a modeling behavior for the employee to better engage with a customer client or stakeholder. As a result, the employee will feel more comfortable in their job position and be more likely to have positive interactions with coworkers and their environment as well as more positive interactions while completing job tasks. In any manufacturing, it is rare for an employee to take servitude to other employees and have little or no contact with customers or clients, putting them in a position to best serve the customer. So, in manufacturing environments, individuals work in teams; however, communication between team members is often minimized or limited, and advancement in service leadership communication may or may not have any effect. There is some evidence to suggest that positive communication amongst coworkers and positive relationships with one's boss or supervisor increases job satisfaction; however, there is not yet research to suggest that the SLM itself could influence job satisfaction in a manufacturing environment.

Manufacturing employees are often comprised of mostly entry-level workers and have responded well to the transactional model. The transactional model is where an employee is rewarded extrinsically for production and, as a result, is more motivated to produce more. Individuals are often promoted based on the level of production and not based on their level of leadership or ability to supervise and support others. As a result, supervisors and managers can easily fill in for employees and often are seen as guides or teachers for lower-level employees. The SLM has elements of teaching and guidance as well as support with an individual's job tasks. The emphasis is on social support and moral support versus monetary or extrinsic rewards. Research has shown that

manufacturing environments often operate well in the transactional model and show crisis resistance during expansions or recessions (Widarmanti et al., 2021). However, research has also shown that promoting individuals who demonstrate leadership ability and focusing on social support tends to retain employees longer and create more collaborative work environments (Depascale, 2021). More collaborative work environments also lead to high levels of crisis resistance as well as boosted employee morale.

Manufacturing environments often are production-oriented, which can produce high levels of stress and have physically demanding work. Studies have shown that if an individual decreases overall mental stress in a manufacturing environment, then they will perform better even in physically demanding environments. Some research has shown the SLM can have positive benefits in reducing mental stress and increasing productive output; however, the studies show that the SLM needs time to produce these kinds of effects (Xu & Zeng, 2020). In a manufacturing environment, there is a high turnover rate which may mean that the SLM does not have the time to positively impact the psychological nature of the job. The research suggests a need for a significant decrease in psychological stress in environments such as manufacturing environments because it leads to chronic mental and physical illnesses (Yang et al., 2019). If an individual is dealing with chronic stress, then they will have physical symptoms, and if they are in a physically demanding environment, they are more likely to injure themselves or develop chronic physical illnesses. Psychological stress is directly correlated to job satisfaction (Ensari, 2021).

Summary and Conclusions

In conclusion, there is a direct link between servant leadership and improving job satisfaction; however, the unique variables that exist in manufacturing pose specific questions for the SLM. Currently, there is a lack of research on the relationship between the SLM and manufacturing. Prior research has called for more investigations into the SLM and unique environments such as manufacturing because of its positive impact on job satisfaction, worker engagement, and benefits to the company. Low job satisfaction has also been linked to mental health and physical health issues, which are becoming more and more prevalent. A solution to this problem may be further research into the SLM and its application. In the next chapter, there will be an in-depth discussion of how the research was conducted, including measurements, populations, ethical research guidelines, and research design.

Chapter 3: Research Method

Research Method

This quantitative study was conducted to examine the relationship between the SLM and job satisfaction in a manufacturing environment. In this chapter, I discuss data collection methods, population, and sampling procedures, as well as the research design and its rationale. Additionally, there will be a presentation of the surveys used to gather pertinent data. The problem this study aimed to address is the lack of research on the relationship between the characteristics of the SLM and job satisfaction elements in manufacturing environments.

Research Design and Rationale

This study is a quantitative, non-experimental study that focused on the relationship between the SLM and job satisfaction in the context of manufacturing. A quantitative non-experimental design has been suggested by researchers to broaden the generalizability of the SLM's findings and unique environments (Eva et al., 2019). A multilinear regression was used to test the relationship between the predictor variable of servant leadership on job satisfaction. This test was used because it meets the required assumption of normality. Quantitative data were gathered using evidence-based valid measures from a sample population. The use of an evidence-based survey is consistent with recent research into the SLM and job satisfaction (Huning et al., 2020; Pekmezci et al., 2017).

Methodology

Quantitative methods are effective when studying multiple nominal variables. Survey research allows for an accurate data collecting method with minimal drawbacks or side effects to participants. Similar research found this to be an effective method of inquiry (Widarmanti et al., 2021). Based on the stated research question, a quantitative method was most appropriate to gather numerical data to better understand the relationship between the variables. A qualitative research method would not appropriately address the research question because the research question was not focused on experiential data. A qualitative approach would be more useful when generating cause-and-effect questions or establishing a framework for future research, given this specific topic. Qualitative research methods are most appropriate for investigating perceptions or interpretations and less about connections between variables.

Web-based surveys create a much larger data pool and minimize time restrictions, whereas an in-person methodology is more time-consuming and limiting. For this study, web-based data collection allowed for more expansive data sampling, though it was met with potential limitations such as a decreased response rate. However, the web-based survey also allowed for an additional level of anonymity for participants due to the nature of the survey software used.

Population

The data were collected from a series of local manufacturing plants. The population was factory workers between the ages of 18 and 65, both male and female. The number of different demographics in the study is unknown; however, it represents a

typical manufacturing population. The online survey information was disseminated to employees via leadership or human resources. This way, appropriate measures of hiding identity could be maintained on the side of the manufacturer as well as the side of the data collector.

Sampling and Sampling Procedures

Each site I contacted to participate in the study was local to me. Prospective participants in this study were first sent an email to determine whether they would like to participate. Emails, phone conversations, or in-person meetings were used to address any concerns that leadership had regarding participation in the study. If a site did not agree to participate in the study, no further contact was made. If they agreed to participate in the study, then a web-based survey link was sent to the point person designated for each site. The point person was an individual familiar with survey data collection and confidentiality. They were likely to be in the human resources department and designated for each site. Additionally, an email was sent out that included the study's purpose, use, protocol, and procedure, as well as a timeline and deadline for all survey data. Each survey discusses relevant information and informed consent for each participant. If a participant did not agree to the informed consent, they exited the survey. If a participant agreed to the informed consent, they were given access to the survey questions. Additionally, SurveyMonkey was used to gather additional participants with their target audience function. The survey and informed consent were the same, however, I had no contact with any other participants or their companies.

The effective sample size was determined by using G*power software Version 3.1.9.7. The given parameters were 90% confidence interval and a 10% margin of error. The sample size was determined to be 171 data points within the participating companies. Efforts were made to exceed the minimal participation number to maximize findings. The data points were gathered across several sites. The sites were compared to one another in a subanalysis. I acquired 199 data points but only 198 could be used. One participant did not complete the SL-7 and as a result the data had to be removed.

Procedures for Recruitment Participation, and Data Collection

Google Forms was used as the web-based survey platform due to its high accessibility and IRB compliance. The informed consent for each participant included relevant research information, confidentiality, options for withdrawal, and advantages and disadvantages of taking the survey, along with information about how to ask additional questions about the research. Participants were given a yes or no consent box. If they clicked no, they were removed from the survey. If they clicked yes, then they were given the survey questions. Once the participant completed the survey questions, they were logged out of the survey and given a confirmation screen of completion. Additionally, SurveyMonkey was used and IRB gave approval before it was used. Researchers have suggested that the web-based survey method is an effective method to gather data and maintain confidentiality (Schulkers, 2017). The data gathered from participants were their perceptions of their leaders' alignment with the SLM and their personal job satisfaction.

Instrumentation and Operationalization of Constructs

The variable of the SLM was measured by the SL-7 (Linden et al., 2015). The variable of job satisfaction was measured by the JSS (Spector, 1985).

Servant Leadership-7

The SL-7 was adapted from the SL-28 in 2015 to improve survey response rates and create an accurate multifaceted measure of the SLM. The SL-7 has seven Likert scale questions measured between 1 and 7, where 1 is *strongly disagree* and 7 is *strongly agree*, which is an ordinal scale. Each question is designed to generate its own subscale. These subscales include emotional healing, creating value for the community, conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, and behaving ethically. This study was conducted to look at each of these subscales and how they relate to job satisfaction and manufacturing. Research has shown that the SL-7 has a greater than .80 reliability and validity rate when measured against other sample criteria (Linden et al., 2015). The SL-7 is an appropriate survey method when coupled with job satisfaction (Schulkers, 2017). Permission to use the SL-7 in this research and a sample survey is given in Appendix A and Appendix B.

Job Satisfaction Survey

The JSS was developed in 1985 as a method to quantitatively measure job satisfaction as well as nine subscales of job satisfaction (Spector, 1985). These subscales include pay, promotion, supervision, fringe benefits, contingent rewards, operational conditions, coworkers, nature of work, and communication. Additionally, there was an overall total satisfaction summary. The JSS contains 36 questions with a Likert scale

between 1 and 6, where 1 is *disagree very much* and 6 is *agree very much*, which is an ordinal data point. Permission to use the JSS along with a sample questionnaire is shown in the Appendix C and Appendix D.

According to past research, the JSS is an appropriate measure to be used in manufacturing facilities (Viljoen, 2019). The JSS is an appropriate measure to be used in conjunction with the SL-7 (McNabb, 2020). This study did not utilize the data gathered from the individual subscales but rather only focused on the overall job satisfaction as the data point. This effectively changes the data from ordinal data to interval data. The assessment was set up in such a way that if individuals missed only a single question, then the subscale associated with that question became null and void; however, the overall job satisfaction point can remain valid (see Spector, 1985). To reduce participant dropout and data corruption and to maximize potential findings outcomes, the overall job satisfaction total was primarily used. The findings of reliability and validity range from .61–.80, with an average score of over .70 for the subscales when compared to similar measures. The total job satisfaction score had a reliability rating of .91 when compared to other factors and dimensions.

Operationalization of Variables

Servant Leadership

As described earlier, servant leadership is not defined as a single characteristic but rather a set of behaviors and characteristics comprised of a model or style. The SLM is defined by employees' perceptions of these characteristics being portrayed by the leader (Eva et al., 2019). An operational definition of the SLM includes an "other-oriented

approach to leadership, manifested through one-on-one prioritizing of follower individual needs and interests, and outward reorientation of their concern for self toward concern for others within the organization and the larger community" (Eva et al., 2019). Each characteristic was measured independently using the SL-7 questionnaire. This provided data on an overall score of servant leadership as well as individual characteristics as they are perceived by employees. An example of the SL-7 questions would be "my leader can tell if something work-related is going wrong" (Linden et al., 2015).

Job Satisfaction

Job satisfaction is commonly defined as a set of attitudes, beliefs, and behaviors an employee has toward the company they work for. Some of these attitudes include a cognitive construct of what their job is like versus what their job should be like, as well as the emotions that arrive from day-to-day activities. Due to its complex nature, the JSS focuses on many different attitudes to fully measure the construct. One of the JSS questions is, "I feel unappreciated by the organization when I think about what they pay me" (Spector, 1985).

Manufacturing Environment

A manufacturing environment is operationally defined as a facility that employs workers on a production or assembly line dedicated to producing one or more physical items. Often these environments do not generate raw materials but rather help assemble and package them. Manufacturing environments typically have transactional leadership, which often causes high turnover and high stress in employees (Widarmanti et al., 2021). Additionally, there is a gap in the literature regarding the SLM's interaction with job

satisfaction in manufacturing environments. The current literature suggests there may be a significant relationship that could benefit overall job satisfaction and manufacturing environments.

Data Analysis Plan

This quantitative study was designed to better understand the relationship between the SLM characteristics on job satisfaction in a manufacturing environment. The research involves two variables and their relationship to a unique environment. However, the variable used to measure the SLM was broken up into seven ordinal scales that capture each aspect of the SLM. An ordinal scale is where each progression of a scale is greater than the previous parts, but a linear progression does not necessarily exist. The JSS uses ordinal scales that have subscales; however, none of the subscales were utilized, and the sum of all the questions were used. The combination of these ordinal scales creates an interval variable that was used to measure the overall job satisfaction. In this analysis there were seven ordinal independent variables and one dependent interval variable. With this variable combination, a multiple regression would be most useful to determine how the independent variables are related to the dependent variable (Multiple Regression, 2013). A multiple regression is an analysis that is designed to determine the relationship between a continuous dependent variable and multiple independent variables. This test will also address variance between variables as well as total variance. The multiple regression gives an overall result that directly addresses the research question of better understanding the relationship between the SLM characteristics on job satisfaction in a manufacturing environment.

Research Questions and Hypotheses

This section will present all research questions and all associated null and alternative hypotheses.

RQ1: What, if any, is the relationship between the SLM characteristic of emotional healing and job satisfaction in a manufacturing environment?

$H_0$1: There is no significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

RQ2: What, if any, is the relationship between the SLM characteristic creating value for the community and job satisfaction in a manufacturing environment?

$H_0$2: There is no significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

H_A2: There is a significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

RQ3: What, if any, is the relationship between the SLM characteristic conceptual skills and job satisfaction in a manufacturing environment?

$H_0$3: There is no significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

RQ4: What, if any, is the relationship between the SLM characteristic empowering the employee and job satisfaction in a manufacturing environment?

$H_0$4: There is no significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

H_A4: There is a significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

RQ5: What, if any, is the relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in a manufacturing environment?

$H_0$5: There is no significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

H_A5: There is a significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

RQ6: What, if any, is the relationship between the SLM characteristic putting subordinates first and job satisfaction in a manufacturing environment?

$H_0$6: There is no significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

H_A6: There is a significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

RQ7: What, if any, is the relationship between the SLM characteristic behaving ethically and job satisfaction in a manufacturing environment?

$H_0$7: There is no significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

H_A7: There is a significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

RQ8: What, if any, is the relationship between the SLM and job satisfaction in a manufacturing environment?

$H_0$8: There is no significant relationship between the SLM and job satisfaction in manufacturing environments.

H_A8: There is a significant relationship between the SLM and job satisfaction in manufacturing environments.

Assumptions

In most statistical analyses there are assumptions about the data and/or its distribution for the analysis to be most accurate. A multilinear regression has additional assumptions that must be met for the multilinear regression to be the best fit for the data. First the data used for the dependent variable must be continuous and there must be two or more independent variables that also use some form of continuous measure (Laerd.com). The next assumption is there should be independence of observations (Laerd.com). To address this a Durbin-Watson Statistic is run as a part of the multilinear regression and that statistic will be reported in the tables provided in chapter 4. The next assumption is there one is looking for a linear relationship between the variables being analyzed. This is why a scatterplot is preferred to other variable charting methods. A scatterplot will be presented along with a best-fit line to show the angle of the

relationship between the independent and dependent variables. Another assumption is that the independent variables must not be multicollinearity. Multicollinearity is when the independent variables are correlated to one another. In SPSS the tolerance/VIF values show that there is no multicollinearity occurring. There should be no significant outliers or incomplete data sets. Both are addressed in data cleaning.

Data Transfer

The researcher gathered data using SurveyMonkey. That data will be transferred to a secure computer, where it was encrypted until used for analysis. The raw data were transferred to Microsoft Excel Microsoft 360 for storage and placed into Statistical Package for Social Sciences (SPSS 26) for analysis. The manager gathered the servant leadership data; SL-7 has a Likert scale between 1 and 7. The JSS, which was used to measure the job satisfaction level of the employee, uses a 1 to 6 Likert scale. In the instances where either measure utilizes reverse scoring methods, those items were input manually in their reverse score as indicated by the assessment instructions.

Data Cleaning

Data cleaning is the process in which the raw data is reviewed for inconsistencies, such as a participant not completing an assessment, as well as data that is significantly outlying. SPSS has a data cleaning function that was used to alert the user to discrepancies for further review, at which point a researcher can manually inspect the data. If there are data that are not fully reviewed then the findings to be skewed in a significant way, which will invalidate the findings.

Threats to Validity

Internal Validity

This study is a nonexperimental quantitative study. An experimental study often manipulates variables to achieve a cause-and-effect relationship; however, in this study, the variables were not manipulated, and therefore a cause-and-effect relationship cannot be concluded.

External Validity

External validity refers to the concept that a study's findings can be applied to other similar groups. This study focuses on the specific group of manufacturing; however, the participants are from Northern California, which carries a specific population validity that may not be fully generalizable to all manufacturing facilities.

Ethical Procedures

No data was gathered until there was IRB approval by Walden University. Any data collection method or source was approved prior to data collection. All participants were voluntary and able to withdraw from the study at any time without consequence. This study is a survey and is not predicted to create psychological or financial harm in any way.

Confidentiality

Psychological data such as the collected data must always remain confidential. All data storage devices are password protected and encrypted. Only the researcher has access to the protected data. Personal identifiable information was not gathered from participants.

Informed Consent

To achieve the most accurate data, possible participants had full anonymity so that they could fully express opinions about their work satisfaction as well as their bosses. If ethical consideration was not given, then the participants would not be fully honest and could potentially face negative repercussions from authority. All participants were kept anonymous, and personal information was not gathered. Informed consent was given to each participant before participating in the study. Basic elements of informed consent included: a brief overview of the study, a brief explanation of its purpose, identifying information of the researcher, as well as her status as a doctoral student, a sample question, a statement of risks and benefits to the participation in the study, time parameters in which to complete the study, a privacy statement, a discussion that the study is voluntary, and the option to withdraw at any time without consequence. The informed consent was reviewed and accepted by the IRB before use.

Summary

This chapter discusses the study's methodologies for gathering data and conducting data analysis. There was a presentation of the surveys that were used, along with data collection methods. Additionally, limitations were discussed as well as generalizability. Lastly, ethical considerations were discussed.

Chapter 4: Results

Introduction

This study is designed to improve the understanding of how the SLM relates to job satisfaction in manufacturing environments. Seven of the components of the SLM were measured against the total score of the JSS using the SL-7. A detailed list of each research question and hypothesis is addressed in Chapter 1. Each part of the SLM, as described in the SL-7 are emotional healing, creating value for the community, conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, behaving ethically. An understanding of the relationship of the SLM and its components with job satisfaction will assist future leadership interactions and resource allocation.

In this chapter, I discuss how data collection was conducted. Then there will be a presentation of the results from the data collection and subsequent analysis of the data. The research questions are as follows:

RQ1: What, if any, is the relationship between the SLM characteristic of emotional healing and job satisfaction in a manufacturing environment?

$H_0$1: There is no significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

RQ2: What, if any, is the relationship between the SLM characteristic creating value for the community and job satisfaction in a manufacturing environment?

$H_0$2: There is no significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

H_A2: There is a significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

RQ3: What, if any, is the relationship between the SLM characteristic conceptual skills and job satisfaction in a manufacturing environment?

$H_0$3: There is no significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

RQ4: What, if any, is the relationship between the SLM characteristic empowering the employee and job satisfaction in a manufacturing environment?

$H_0$4: There is no significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

H_A4: There is a significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

RQ5: What, if any, is the relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in a manufacturing environment?

$H_0$5: There is no significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

H_A5: There is a significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

RQ6: What, if any, is the relationship between the SLM characteristic putting subordinates first and job satisfaction in a manufacturing environment?

H_06: There is no significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

H_A6: There is a significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

RQ7: What, if any, is the relationship between the SLM characteristic behaving ethically and job satisfaction in a manufacturing environment?

H_07: There is no significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

H_A7: There is a significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

RQ8: What, if any, is the relationship between the SLM and job satisfaction in a manufacturing environment?

H_08: There is no significant relationship between the SLM and job satisfaction in manufacturing environments.

H_A8: There is a significant relationship between the SLM and job satisfaction in manufacturing environments.

This chapter will provide a description of the findings for each of these hypotheses as well as an interpretation of the data. This chapter will also present graphics that show data tables and graphs illustrating the findings.

Data Collection

The population being studied was manufacturing employees in the United States. Participants were both men and women ages 18 to 65, currently working in the manufacturing industry. No other descriptive demographic information was gathered. As a result of not gathering additional demographic information, it is unclear how representative the sample is to the larger population with regards to demographics. However, the samples were randomly gathered from the United States. G*power software Version 3.1.9.7 was used. The given parameters were 90% confidence interval and a 10% margin of error. As a result, the G*power found that a minimum sample size was 171 data points for this research, which translates to 171 participants. The data gathering took approximately 4 months and yielded 198 participants with usable data. Initially, local manufacturing plants were contacted to participate; however, for the course of 4 months there were only 10 total data points. After receiving permission from the IRB, SurveyMonkey's target audience was used, and 206 data points were gathered in 1 day. Out of the total data there were 15 participants who did not agree to the informed consent on the first page of the survey, and two participants did not fully submit their survey and, as a result, were disqualified from participating further, leaving 189 participants. There were 58 participants who did not fully complete the surveys; however, these surveys were scrutinized, and only one was shown not to be usable. The other 57

participants were within the margin of participation as instructed in the JSS (Spector, 1997). One participant's data were removed because they did not complete the SL-7 and per instruction there is no margin for completion on that assessment (Linden et al., 2015). As a result, only 198 participants' data were used.

The data were gathered from several different sources used through SurveyMonkey. SurveyMonkey has many sources and nearly every participant was from a different company ranging across the United States. Ten of the responses came from local businesses whereas the rest were sourced through SurveyMonkey's target audience function. This created a random sample; however, because the specific demographics were not collected, it is unclear of representative the sample was to the overall target population. No covariates were used in the model. This is because when testing the SLM's relationship with JSS in manufacturing there is a lack of evidence to suggest that there is a covariate or what it could be.

This research used a survey model with no interventions or treatments. The data were gathered using the JSS. The JSS is a survey that measures overall job satisfaction as well as nine subscales. Those subscales are pay, promotion, supervision, fringe benefits, contingent rewards, operating conditions, coworkers, nature of work, and communication. These subscales combined both intrinsic and extrinsic factors that lead to overall employee satisfaction. This research did not use these subscales and they were not included in the research question. The JSS has 36 questions that use a 6-point Likert Scale where 1 is *strongly disagree* and 6 is *strongly agree*. Some of the items were scored normally where some of the items are reverse scored. The reverse scored items needed to

be reversed before adding them to the rest of the data for analysis. The JSS scoring instructions were on the JSS website authored by Spector.

The SL-7 was the measurement used for the Servant leadership model. The SL-7 is a condensed version of the SL-28, which has shown to have similar accuracy and validity (Liden et al., 2015). The SL-7 has seven items and uses a 7-point Likert Scale where 1 means *strongly disagree* and 7 is *strongly agree*. All items are scored normally. The SL-7 has seven subscales that are each a component of the servant leadership model. Each subscale is addressed in the research questions and will be analyzed to answer the research questions.

Results

To address the research questions, a multiple linear regression was used. The base research question was: What, if any, is the relationship between the SLM characteristics and job satisfaction in a manufacturing environment? This question was broken down into eight research questions to address each characteristic's relationship and how the SLM total interacted with job satisfaction.

Figure 2

ANOVA Summary

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36266.598	7	5180.943	7.955	<.001[b]
	Residual	123745.381	190	651.291		
	Total	160011.980	197			

a. Dependent Variable: JSS_SUM_Clean

b. Predictors: (Constant), SL7, SL3, SL1, SL6, SL4, SL5, SL2

The multiple linear regression was conducted using SPSS Version 28.0.1.0. The model summary showed an R of .476 and an R^2 of .227 as well as showing a $p < .001$. The predictive values of R (.476) and R^2 (.227) were shown to be significant. The adjusted R squared indicated that the overall variance in the dependent variable that can be attributed to the SLM, and its components was approximately 20%. The model breakdown showed that while the overall SLM was significant there were some of the characteristics that were not significant in predicting job satisfaction.

Table 2

Regression Model Summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.476[a]	.227	.198	25.52041	2.136

a. Predictors: (Constant), SL7, SL3, SL1, SL6, SL4, SL5, SL2

b. Dependent Variable: JSS_SUM_Clean

Note. This table illustrates the relationship between the SL7 and the JSS.

Each research question will be broken down into their hypotheses and addressed individually. The following model illustrates which SL7 questions had a significant finding and which did not. Additionally, this model shows the standardized coefficients beta for each of the questions indicating the strength of their effect on the JSS.

Table 3

Regression Results by Model

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	91.027	7.188		12.664	<.001	76.849	105.205					
	SL1	.347	1.671	.019	.208	.836	-2.949	3.644	.306	.015	.013	.474	2.109
	SL2	1.869	2.056	.117	.909	.365	-2.186	5.924	.379	.066	.058	.245	4.079
	SL3	.828	1.370	.059	.604	.547	-1.875	3.531	.294	.044	.039	.425	2.354
	SL4	-1.410	1.557	-.098	-.906	.366	-4.481	1.661	.276	-.066	-.058	.346	2.889
	SL5	1.999	1.804	.131	1.108	.269	-1.559	5.558	.367	.080	.071	.291	3.432
	SL6	.181	1.569	.011	.115	.908	-2.914	3.275	.333	.008	.007	.479	2.087
	SL7	4.820	1.294	.309	3.726	<.001	2.268	7.371	.435	.261	.238	.591	1.692

a. Dependent Variable: JSS_SUM_Clean

$H_0$1: There is no significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

The *p* value for emotional healing was .836. This indicates that this characteristic of the SLM is not significantly related to job satisfaction. This research failed to reject null hypothesis 1.

$H_0$2: There is no significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

H_A2: There is a significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

The *p* value for creating value was .368. This indicates that this characteristic of the SLM is not significantly related to job satisfaction. This research failed to reject null hypothesis 2.

$H_0$3: There is no significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

H_A3: There is a significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

The *p* value for conceptual skills was .547. This indicates that this characteristic of the SLM is not significantly related to job satisfaction. This research failed to reject null hypothesis 3.

H_04: There is no significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

H_A4: There is a significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

The *p* value for empowering the employee was .366. This indicates that this characteristic of the SLM is not significantly related to job satisfaction. This research failed to reject null hypothesis 4.

H_05: There is no significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

H_A5: There is a significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

The *p* value for helping subordinates grow was .269. This indicates that this characteristic of the SLM is not significantly related to job satisfaction. This research failed to reject null hypothesis 5.

$H_0$6: There is no significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

H_A6: There is a significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

The *p* value for putting subordinates first was .908. This indicates that this characteristic of the SLM is not significantly related to job satisfaction. This research failed to reject null hypothesis 6.

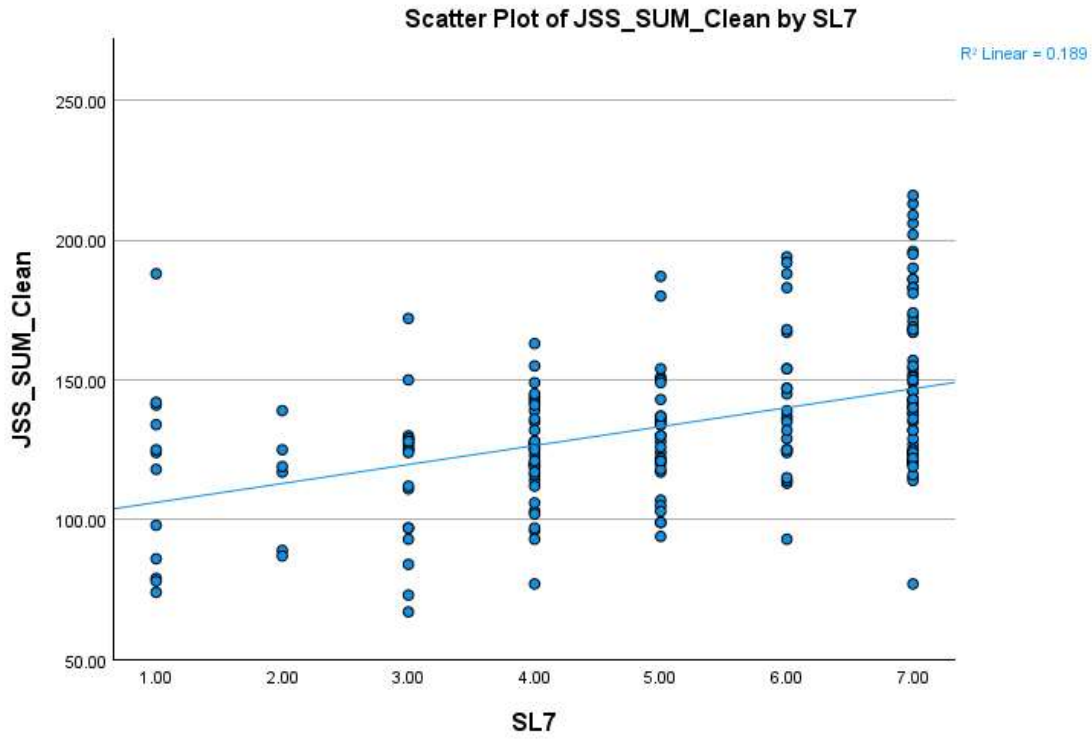
$H_0$7: There is no significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

H_A7: There is a significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

The *p* value for behaving ethically was <.001. This indicates that this characteristic of the SLM is significantly related to job satisfaction. The standardized coefficients beta is .309 showing a relationship between behaving ethically and job satisfaction. These findings support alternative hypothesis 7.

Figure 3

Scatterplot of JSS and Question 7 With Best Fit Line



This scatterplot shows the positive trend between the increase in question number 7, which measures behaving ethically, and the increase in the total JSS score.

$H_0$8: There is no significant relationship between the SLM and job satisfaction in manufacturing environments.

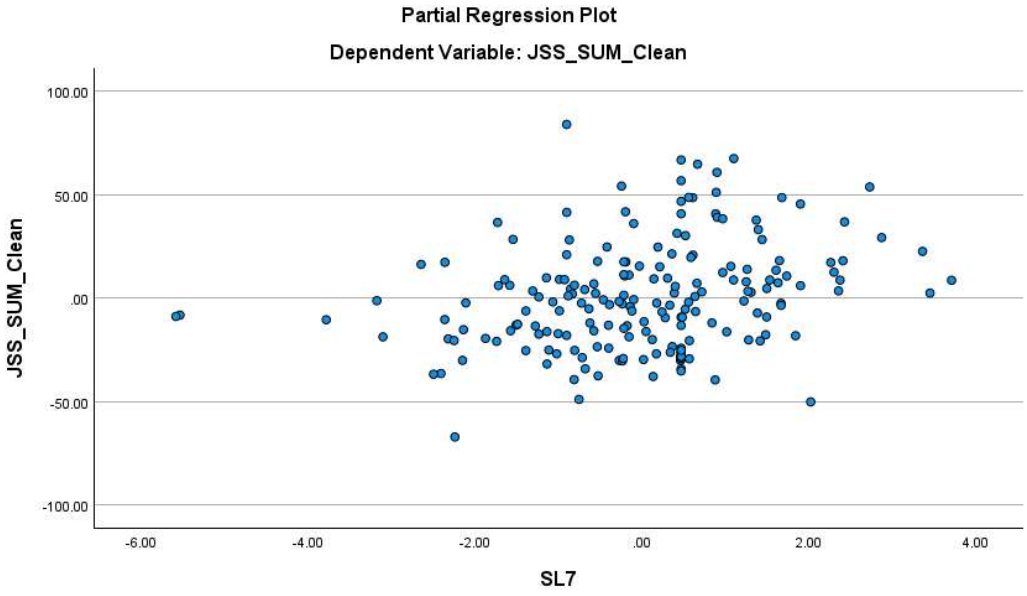
H_A8: There is a significant relationship between the SLM and job satisfaction in manufacturing environments.

The *p* value for the SLM was <.001. This indicates that this characteristic of the SLM is significantly related to job satisfaction. The predictor of R (.419) and R^2 (.179) show impacted on the dependent variable. The adjusted R squared indicates that 17% of

the overall effect on the dependent variable can be accounted for by the SLM. The research supports the alternative hypothesis 8.

Figure 4

Scatterplot of JSS and SL7



This scatterplot shows a positive relationship between the total SL7 score and the total JSS score.

Statistical Assumptions

As noted earlier, there are two major assumptions when using multiple regression. The first is that the dependent variable is continuous. This assumption is met, because the JSS has a total that is considered continuous. Even though the individual item is on a Likert scale, the sum of the scales becomes a continuous variable. The second assumption is there are multiple independent variables. These independent variables can be continuous, or categorical. This is true for this research because each of the SLM's

characteristics were measured and they use only one Likert scale, making them ordinal variables.

Summary

The purpose of the research was to address a lack of research in the literature about the SLM and its relationship to job satisfaction in manufacturing environments. This quantitative multiple linear regression study was done to analyze the relationship between the SLM and job satisfaction using data gathered from employees in the manufacturing industry. The analysis illustrated that the total SLM has a statistical significance relationship with job satisfaction. The analysis shows that the only characteristic of the SLM that has a significant relationship with job satisfaction is behaving ethically. All the other characteristics are shown to not have a significant relationship with job satisfaction in manufacturing environments.

The data were sourced from Survey Monkey and were taken from many regions in the United States. The participants were individuals who currently work in the manufacturing industry and are from the ages of 18 to 65. There were 198 participants and 197 were used.

Chapter 5: Discussion, Conclusion, and Recommendations

Introduction

The purpose of this study was to address the lack of research on the servant leadership model's relationship to job satisfaction in manufacturing environments. The study was conducted because manufacturing environments employ many people and often have low job satisfaction, which can create negative social change. Studying how to improve job satisfaction with the use of the SLM can produce positive social change (Brough et al., 2020). Research into the SLM has shown that this leadership style can improve job satisfaction; however, manufacturing environments are unique and may or may not have the same positive relationship between the SLM and job satisfaction (Schulkers, 2017). The strong positive relationship between the SLM and job satisfaction has been found in many other industries; however, these industries are often skilled services industries, such as nursing or education (Eva et al., 2019). The body of literature suggests that the SLM has components that often have greater or lesser relationships to job satisfaction based on different factors, which include industry. As a result, not only was the SLM tested as a whole, but each component was also evaluated individually.

My research indicates a significant positive relationship between the SLM and job satisfaction in manufacturing environments. The multiple linear regress model showed $R^2 = .227$, $F(7,197) = 7.955$, $p < .001$. Additionally, it was found that the component of behaving ethically was the primary part of the SLM that lead to its positive relationship to job satisfaction in manufacturing environments with a standardized coefficient beta of .309. The other six components of the SLM; emotional healing, creating value for the

community, conceptual skills, empowering, helping subordinates grow and succeed, and putting subordinates first were found to not have a significant relationship with job satisfaction in manufacturing environments. This is a unique finding in that behaving ethically can be seen as having a stronger relationship with job satisfaction than SLM. Each of these findings will be explained more in depth in this chapter along with suggestions for further research.

Interpretation of the Findings

This section will discuss how this study furthered the field's understanding of the SLM's relationship to job satisfaction as presented in Chapter 2. An analysis of the findings will be presented in the context of the theoretical framework.

$H_0$1: There is no significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

H_A1: There is a significant relationship between the SLM characteristic emotional healing and job satisfaction in manufacturing environments.

The analysis showed there was no significant relationship between emotional healing and job satisfaction in manufacturing environments. The component of emotional healing refers to a set of behaviors that help an employee heal from past negative interaction and heal relationships around them by having a safe relationship with their leader (Lu et al., 2019). In most job environments, an employee brings with them a past of negative experiences that can lead to low job satisfaction, even if their current employment is not negative. Emotional healing has shown to increase job satisfaction in many other job environments; however, it has no relationship in a manufacturing

environment. This finding furthers the fields understanding of the SLM by showing that key components do not have an effect in different environments. It is unclear why this is taking place; however, some research suggests that emotion healing requires a level of emotional vulnerability, and a manufacturing environment may not have a structure that can uniformly allow for that (Viljoen, 2019).

$H_0$2: There is no significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

H_A2: There is a significant relationship between the SLM characteristic creating value for the community and job satisfaction in manufacturing environments.

The analysis showed no significant relationship between creating value for the community and job satisfaction. Creating value for the community is where the leader encourages or incentivize employees to engage in the community either for volunteer work or some other function. This can help work–life balance and enrich an employee's life. It is unclear as to why this characteristic is unrelated to job satisfaction with manufacturing workers. However, it is not uncommon for manufacturing workers to work long hours and need their personal time off to meet work life balance (Viljoen, 2019). It warrants further investigation into if there is a mechanism by which creating value for the community could be altered to meet the needs of the manufacturing industry.

$H_0$3: There is no significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

H_A3: There is a significant relationship between the SLM characteristic conceptual skills and job satisfaction in manufacturing environments.

The research analysis showed that the SLM component of conceptual skills and job satisfaction in manufacturing environments are not statistically related. Conceptual skills refers to the concept that if a leader provides opportunities for skill development and enhancement, then the leader will act as a servant of growth for the employee. This finding is particularly odd because past research suggests that in manufacturing environments skill advancement improve job satisfaction and employee motivation (Robbins & Coulter, 2012). Further research should be done to determine if the SLM characteristics of conceptual skills are using interventions that are somehow ineffective in manufacturing environments. This is an important finding because it suggests that even if a leader uses the right concepts to improve job satisfaction, the process of intervention is equally important.

$H_0$4: There is no significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

H_A4: There is a significant relationship between the SLM characteristic empowering the employee and job satisfaction in manufacturing environments.

The finding for this research is that SLM characteristic of empowering the employee is not significantly related to job satisfaction in manufacturing environments. This is a unique finding because other research has shown empowering the employee is not just linked to job satisfaction, but also employee motivation (Aboramadan et al., 2022). This suggests that empowering the employee may not be a factor in manufacturing

environment. Furter research should be conducted to explain this phenomenon, and if other work environments challenge the relationship between empowering the employee and job satisfaction.

$H_0$5: There is no significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

H_A5: There is a significant relationship between the SLM characteristic helping subordinates grow and succeed and job satisfaction in manufacturing environments.

This research suggests there is no significant relationship between helping subordinates grow and succeed and job satisfaction in manufacturing environments. This finding is backed by other research where the relationship between helping subordinates grow and succeed and job satisfaction has moderator variables that make the relationship inconsistent. This finding demonstrates one of the major criticisms of the SLM where one of the fundamental cores of the SLM is that the leader should strive to support the subordinate to become the best person they can be. This can sometimes lead to the employee finding another job with a different company. In unskilled labor jobs, especially ones with lower pay, the servant leader will foster talents that empower the employee to leave. This only happens to subordinates who want to grow and achieve. As a result, some employees do not engage with their leader in this way and the ones who do will often leave for better opportunities. This is why it would be expected to see no relationship between helping subordinates grow and succeed and job satisfaction in

manufacturing environments. Further research could be done to confirm the moderator variables present in this relationship and determine it is consistent with other findings.

$H_0$6: There is no significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

H_A6: There is a significant relationship between the SLM characteristic putting subordinates first and job satisfaction in manufacturing environments.

This research found that there is no significant relationship between putting subordinates first and job satisfaction in manufacturing environments. This finding is not unique among the lecturers. There has been speculation about a moderator variable being based on personality, where some people will use the leader to support them in achieving and others will try and take advantage of the leader to do less work. To better understand this unknown moderator variable, either a qualitative study should be done to better understand the employee's response to putting subordinates first or a quantitative study using a personality model such as HEXACO to better understand how personality affects the SLM characteristic of putting subordinates first.

$H_0$7: There is no significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

H_A7: There is a significant relationship between the SLM characteristic behaving ethically and job satisfaction in manufacturing environments.

This research demonstrates that there is a significant relationship between behaving ethically and job satisfaction in a manufacturing environment. The concept of behaving ethically is not whether the manager is behaving in an ethical manner or if the

manager is following the subordinate moral code but rather the subordinate's perception of whether the leader is following their own moral code and values. This finding supports the existing research; however, what is unique about this finding is that it is the only characteristic of the SLM that has a significant relationship with job satisfaction in a manufacturing setting. In the existing research into other work environments behaving ethically is often connected to job satisfaction, but it is not the most related to job satisfaction. In some studies, behaving ethically is shown not to be correlated with job satisfaction. This finding is important because it suggests that an improvement in this characteristic of the SLM can significantly increase job satisfaction in manufacturing environments, and additional effort into the other areas of the SLM maybe a waste of resources. This finding will help manufacturing companies best allocate resources.

$H_0$8: There is no significant relationship between the SLM and job satisfaction in manufacturing environments.

H_A8: There is a significant relationship between the SLM and job satisfaction in manufacturing environments.

The research found that the SLM as a leadership model has a significant relationship to job satisfaction in manufacturing environments. This finding was discovered by analyzing the total score of the SL-7 and comparing it to the total score of the JSS. This is an important finding because some past research finds that the SLM was not associated with change commitment and that change commitment is related to job satisfaction (Schulkers, 2017). This research into the SLM and its relationship to job satisfaction in different work environments was suggested by literature reviews (Eva et

al., 2019). Additional authors suggested that up until this point nearly all the research had suggested that the SLM increases job satisfaction and job motivation, however, the research was primarily focused on service industries and skilled labor (Ahmad et al., 2021). This left a gap in the knowledge about the SLM and its usefulness in other industries. This finding supports the idea that the variables of the SLM and JSS are related, however, further research should be conducted to determine if there are moderator variables in the manufacturing industry, similar to other industries.

Implications of findings

The SLM is a leadership approach that focuses on supporting subordinates to be the best version of them self by having the leader remove obstacles and providing scaffolding for growth (Greenleaf, 1977). This principle is based on key characteristics that a servant leader must create an environment of growth and support for their subordinates. It has been supported by other research that these characteristics have varying effects on employee job satisfaction. This research suggests that in some work environments some SLM characteristics play almost no role while others play a larger role, with regard to job satisfaction. One of the research implications of this is that future research must include a breakdown of the characteristics of the SLM before being analyzed. This was also suggested in a past literature review (Eva et al., 2019). The research findings of this study align with this framework where the characteristics of the SLM can act independently of each other and can have their own relationship with constructs such as job satisfaction. Additionally, the finding that the SLM as a whole has a significant relationship with job satisfaction is supported by prior research, except in

manufacturing environments, where some research questioned if there was a relationship at all. The major unique finding that has not been previously discovered in past research, is that in manufacturing environments behaving ethically was the most effective SLM characteristic, and no other characteristic had a significant relationship with job satisfaction. This finding may account for the SLM's inconsistencies in manufacturing environments.

The framework of the SLM, JSS, social learning theory and social exchange theory were all supported. The finding supports that the less contact an employee has from leadership the less effective the SLM is, which is a key tenet of the SLM. The JSS findings suggest that an employee's direct supervisor has the most significant impact on their job satisfaction, particularly in a manufacturing setting where this role is typically filled by a supervisor or an executive leader. The frameworks collectively suggest that without consistent interaction among coworkers or direct contact with leadership, the impact of the SLM on JSS is reduced. While this explains the low impact of the SLM, it does not account for the isolated influences from behaving ethically.

Limitations of the Study

One of the limitations was the possibility of significant differences in work environment between companies. The data that was gathered came from many companies and as a result there were not enough data points from any one company to do a work environment comparison. Some research suggests that job embeddedness can create individual differences (Huning et al., 2020). However, this was not tested for. In future research it is suggested an ANACOVA be used to account for differences between

companies. Nevertheless, the fact that the data was from random locations throughout the United States the generalizability should be high.

Recommendations

Many of the proposed recommendations are made in the review of each of the research questions. However, that are some main recommendations on how future research could further this point of knowledge. One of the future recommendations would be to do a study aimed at determining what, if any, unique moderator variables are present in manufacturing environments that could affect the SLM's relationship with job satisfaction, such as job role. Moderator variables have been found in other working environments that significantly change how leadership style impact job satisfaction. Understanding these variables better could lead to a deeper understanding of how to improve job satisfaction in manufacturing environments using leadership interventions (Pekmezci et al., 2017). Gender differences could be studied as a possible additional variable of the SLM relationship with job satisfaction. It would be interesting to see how gender plays a role in how SLM affects job satisfaction in manufacturing environments; however, newer research has suggested that gender differences are more or less pronounced based on company culture (Babbie, 2017). As a result, company culture should also be investigated as a possible moderator variable.

Implications

Low job satisfaction has been linked to many negative outcomes for employees such as poor mental health, poor physical health, and negative attitudes. These outcomes can lead to negative social interactions and negative social change. The manufacturing

industry commonly has low worker job satisfaction and has difficulty improving current status. To effect positive social change the manufacturing industry was researched to determine how to improve job satisfaction among the workforce. The SLM has been shown to increase job satisfaction in many other industries except in the manufacturing industry. This research suggests that if leadership in manufacturing industry environments improve the SLM characteristic of behaving ethically, then employees on average will increase their job satisfaction. Increased job satisfaction in this industry will increase positive social change by reducing poor mental health, as well as improve overall physical health and reduce negative attitudes. This research showed that it is likely possible to create positive social change by improving leadership behaving ethically. The characteristic of behaving ethically is acting ethically and consistently as well as giving the perception to subordinates that the leader is acting ethically and will act ethically in the future. There are interventions on how to improve this characteristic and it would be important to determine which intervention is most effective and efficient.

Conclusion

This research found a unique relationship between SLM characteristics and job satisfaction in manufacturing environments. The research found that in manufacturing environments there is no significant relationship between job satisfaction and the SLM characteristics of: emotional healing, creating value for the community, conceptual skills, empowering, helping subordinates grow and succeed, or putting subordinates first. The lack of a significant relationship in all these characteristics is unique to the manufacturing environment and should be investigated further. This research found that in

manufacturing environments there is a significant relationship between job satisfaction and the characteristics of behaving ethically within the SLM. This is not a unique finding in that many other work environments have shown similar relationships to behaving ethically; however, what is unique is that behaving ethically is the only SLM characteristic that has shown a significant relationship to job satisfaction in the manufacturing environment. These implications suggest that by improving manufacturing leaders' behaving ethically characteristic of the SLM, then they will effectively increase their workers' job satisfaction. Additionally future research should work to understand why this factor plays a more significant role than any other SLM characteristic.

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Appendix A: Permission to Use SL-7

PsycTESTS

Servant Leadership Scale-7

PsycTESTS Citation:
Liden, R. C., Wayne, S. J., Meuser, J. D., Hu, J., Wu, J., & Liao, C. (2015). Servant Leadership Scale-7 [Database record]. Retrieved from PsycTESTS. doi: https://dx.doi.org/10.1037/t41818-000

Instrument Type:
Rating Scale

Test Format:
Responses for the 7 items use a 7-point "strongly disagree" to "strongly agree" response scale.

Source:
Liden, Robert C., Wayne, Sandy J., Meuser, Jeremy D., Hu, Jia, Wu, Junfeng, & Liao, Chenwei. (2015). Servant leadership: Validation of a short form of the SL-28. The Leadership Quarterly, Vol 26(2), 254-269. doi: https://dx.doi.org/10.1016/j.leaqua.2014.12.002, © 2015 by Elsevier. Reproduced by Permission of Elsevier.

Appendix C: JSS Permission

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Appendix E: SPSS Outputs

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	91.027	7.188		12.664	<.001	76.849	105.205					
	SL1	.347	1.671	.019	.208	.836	-2.949	3.644	.306	.015	.013	.474	2.109
	SL2	1.869	2.056	.117	.909	.365	-2.186	5.924	.379	.066	.058	.245	4.079
	SL3	.828	1.370	.059	.604	.547	-1.875	3.531	.294	.044	.039	.425	2.354
	SL4	-1.410	1.557	-.098	-.906	.366	-4.481	1.661	.276	-.066	-.058	.346	2.889
	SL5	1.999	1.804	.131	1.108	.269	-1.559	5.558	.367	.080	.071	.291	3.432
	SL6	.181	1.569	.011	.115	.908	-2.914	3.275	.333	.008	.007	.479	2.087
	SL7	4.820	1.294	.309	3.726	<.001	2.268	7.371	.435	.261	.238	.591	1.692

a. Dependent Variable: JSS_SUM_Clean

Casewise Diagnostics[a]

Case Number	Std. Residual	JSS_SUM_Clean	Predicted Value	Residual
60	3.462	188.00	99.6602	88.33979

a. Dependent Variable: JSS_SUM_Clean

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions							
				(Constant)	SL1	SL2	SL3	SL4	SL5	SL6	SL7
1	1	7.611	1.000	.00	.00	.00	.00	.00	.00	.00	.00
	2	.135	7.518	.13	.01	.01	.09	.09	.02	.02	.09
	3	.067	10.676	.28	.03	.01	.21	.00	.07	.01	.32
	4	.053	11.988	.06	.05	.00	.64	.14	.06	.01	.22
	5	.043	13.377	.00	.01	.09	.01	.74	.28	.01	.07
	6	.037	14.293	.00	.09	.02	.00	.01	.01	.87	.26
	7	.032	15.448	.49	.58	.03	.01	.01	.21	.08	.02
	8	.023	18.358	.03	.23	.85	.05	.00	.33	.00	.02

a. Dependent Variable: JSS_SUM_Clean

Descriptive Statistics

	Mean	Std. Deviation	N
JSS_SUM_Clean	133.8990	28.49989	198
SL1	5.3636	1.58004	198
SL2	4.8081	1.78645	198
SL3	4.5758	2.03568	198
SL4	4.3384	1.98513	198
SL5	4.4394	1.86713	198
SL6	5.2222	1.67426	198
SL7	5.0909	1.82810	198

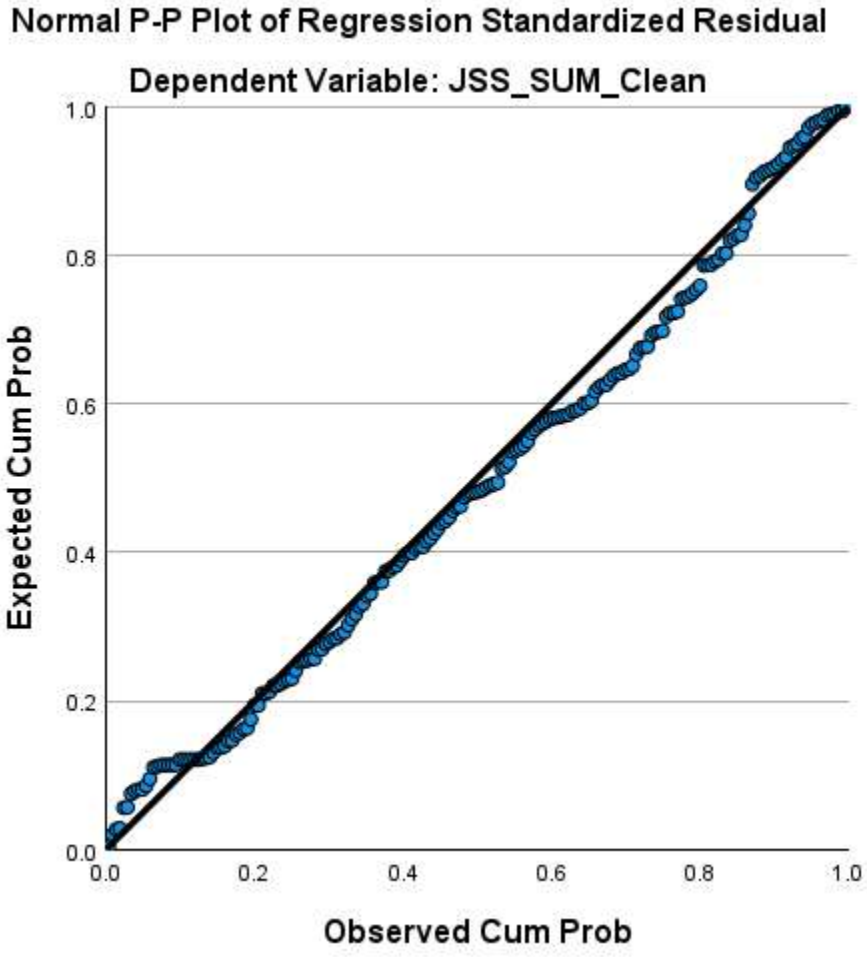
Correlations

		JSS_SUM_Clean	SL1	SL2	SL3	SL4	SL5	SL6	SL7
Pearson Correlation	JSS_SUM_Clean	1.000	.306	.379	.294	.276	.367	.333	.435
	SL1	.306	1.000	.690	.564	.618	.625	.553	.470
	SL2	.379	.690	1.000	.705	.736	.805	.624	.542
	SL3	.294	.564	.705	1.000	.696	.656	.527	.381
	SL4	.276	.618	.736	.696	1.000	.739	.564	.426
	SL5	.367	.625	.805	.656	.739	1.000	.613	.507
	SL6	.333	.553	.624	.527	.564	.613	1.000	.590
	SL7	.435	.470	.542	.381	.426	.507	.590	1.000
Sig. (1-tailed)	JSS_SUM_Clean	.	<.001	<.001	<.001	<.001	<.001	<.001	<.001
	SL1	.000	.	.000	.000	.000	.000	.000	.000
	SL2	.000	.000	.	.000	.000	.000	.000	.000
	SL3	.000	.000	.000	.	.000	.000	.000	.000
	SL4	.000	.000	.000	.000	.	.000	.000	.000
	SL5	.000	.000	.000	.000	.000	.	.000	.000
	SL6	.000	.000	.000	.000	.000	.000	.	.000
	SL7	.000	.000	.000	.000	.000	.000	.000	.
N	JSS_SUM_Clean	198	198	198	198	198	198	198	198
	SL1	198	198	198	198	198	198	198	198
	SL2	198	198	198	198	198	198	198	198
	SL3	198	198	198	198	198	198	198	198
	SL4	198	198	198	198	198	198	198	198
	SL5	198	198	198	198	198	198	198	198
	SL6	198	198	198	198	198	198	198	198
	SL7	198	198	198	198	198	198	198	198

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	99.6602	153.6895	133.8990	13.56814	198
Std. Predicted Value	-2.523	1.459	.000	1.000	198
Standard Error of Predicted Value	2.521	12.887	4.857	1.654	198
Adjusted Predicted Value	94.5701	152.6175	133.8604	13.62996	198
Residual	-59.88877	88.33980	.00000	25.06290	198
Std. Residual	-2.347	3.462	.000	.982	198
Stud. Residual	-2.440	3.560	.001	1.001	198
Deleted Residual	-64.76038	93.42992	.03855	26.06156	198
Stud. Deleted Residual	-2.473	3.675	.002	1.008	198
Mahal. Distance	.927	49.242	6.965	6.042	198
Cook's Distance	.000	.091	.005	.010	198
Centered Leverage Value	.005	.250	.035	.031	198

a. Dependent Variable: JSS_SUM_Clean


Normal P-P Plot of Regression Standardized Residual
Dependent Variable: JSS_SUM_Clean
Expected Cum Prob
Observed Cum Prob
0.0
0.2
0.4
0.6
0.8
1.0