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# Leadership Styles Manufacturing Business Managers Use to Reduce Workplace Injuries

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This is to certify that the doctoral study by

Joe Sparks

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Abstract

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MBA, King University, 2015

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Doctoral Study Submitted in Partial Fulfillment

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Abstract

The cost of workplace injuries is a major concern for business managers. Business managers in the production, transportation, and material moving industries experience the highest injury rate with an annual average of 198.5 lost days away from work. The purpose of this single case study was to explore transformational leadership skills and strategies used by manufacturing business managers to reduce workplace injuries. The conceptual framework for this study was Bass and Burns's transformational leadership theory. Data collection included semistructured interviews to elicit narratives from 3 managers from a metal manufacturing company located in the southeastern United States about the leadership strategies they used to reduce workplace injuries. Data analysis consisted of coding and using Yin's 5-step data analysis technique to analyze interview data and information from relevant company documents to identify key themes and triangulate data. From the data analysis, the themes of communication, training, and equipment/tools emerged as methods to reduce workplace injuries. The findings and recommendations from this study might assist business managers who desire information to influence the safety culture of their organizations. Social change implications include helping business managers to improve their organizational safety reputation with the workers and the community. A positive reputation would lead to an increase in community and political support for the organization that will lead to new contracts creating future employment opportunities.

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Dedication

To my Lord and Savior Jesus Christ, who granted me the strength to make it through this journey. I dedicate this research project to my grandmother, Lillian M. Sparks, who instilled in me the value of obtaining an education to help others to live a life that will glorify God. I rejoice in the blessing that the Lord has provided my family and me. It is only because of His grace and mercy that has followed us along this journey and His patience, longsuffering sustained us during trying times, and His peace and joy that leads us according to His will to glorify Our Father.

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I give thanks and honor the My Lord and Savior Jesus Christ without whom I would not be here today. I would like to thank my wife, Brittonya, who has been my constant support in every aspect of my journey to become a good husband, father, and friend while fulfilling God's will for me to preach His Word to a dying world. I offer a special thanks to my children, Erica, Kia, Kalyn, and especially, Seth and Gabrielle, for their sacrifice of playtime with daddy during this journey, you all have inspired me to keep going when I wanted to give up. Mere words are not enough when I think about the continued prayers and support from my Pastor, Derick Wakefield, and the Freedom Fellowship Christian Church Family. I want you all to know that I am grateful for every prayer because I needed them all along this educational journey. I also want to offer a special thank you to all of the instructors, especially my committee members led by Chair Dr. Peter Anthony and Dr. Gina Smith, who played an enormous role in me completing my doctoral journey. Without you I would not be here today, thank you all so much.

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Section 1: Foundation of the Study

Workplace injuries like slips, trips, and falls are one of the leading causes of losses in productivity and profitability for businesses. These workplace injuries cost the U.S. economy billions in lost production, healthcare costs, and immense suffering and pain to workers, often resulting in loss of life (Bureau of Labor Statistics [BLS], 2015). Limited research has been conducted on how to reduce workplace injuries despite the cost associated with these injuries. My intent with this study was to explore the strategies used by manufacturing business managers to reduce workplace injuries.

## Background of the Problem

Occupational and work-related injuries represent serious challenges to business owners and managers forcing them to fill the void created by an injury and causing financial and other burdens that can also be debilitating to the organization. Occupational injuries are among the leading causes of death and disability around the world, the financial burden and other issues they create has business leaders recognizing the need to address this problem (Fagan & Hodgson, 2017). In 2015, approximately 2.9 million nonfatal workplace injuries and illnesses were reported by private industry employers (BLS, 2016). The most disabling injuries, like overexertion to repetitive motion, translate into costs of a billion dollars a week spent by businesses (Occupational Safety & Health Administration [OSHA], 2015). As the BLS (2016) data indicates, private industry business leaders need to develop a major project to reduce, control, and ultimately eliminate workplace injuries and associated costs.

The objective of this study was to undertake research so that the results may aid owners and managers with pertinent analysis and findings that could be used to improve and develop of cost-effective, safety programs; planning; and a timetable for projects. The lens of the transformational leadership theory and its constructs served to underpin the study and provide additional ways to explore the problem. Project managers must be able to identify needed resources according to the stakeholder's priorities, which are health and safety, staff time, training department, the cost associated with planning and promotion of the project, new equipment or upgraded equipment, and administrative costs (Antonio, Nicholas, & Guzman, 2015). Stakeholder expectations resulting from committing resources, reduced injuries, improved safety culture, reduced lost days from work because of injury, strong employee safety commitment, improved safety culture, and the success of an organization means that managers should embrace a culture that promotes safety. The targeted population was business managers from a metal manufacturing company plant in the southeastern United States. The target group of business managers was suitable for this study because managers with financial responsibilities control budgets and guide the procedures used for injury prevention.

## Problem Statement

Globally, 2.3 million deaths per year can be attributed to occupational injury or work-related diseases, with the highest workplace injury rate being among organizations with employees with less than 6 months of work experience (Lay et al., 2016). Medically recordable workplace injuries cost employees, companies, and insurance companies an annual average of $37,000 per injury (Center for Disease Control and Prevention, 2015).

The general business problem was that workplace injuries have an adverse financial effect on organizational profitability. The specific business problem was that some manufacturing business managers lack strategies to reduce workplace injuries

**Purpose Statement**

The purpose of this qualitative case study was to explore the strategies that manufacturing business managers use to reduce workplace injuries. The targeted population was manufacturing business managers successful in reducing workplace injuries from one metal manufacturing company with seven plants located in the southeastern United States. This targeted group was applicable to the study because managers guide the procedures used for ensuring safety and accident prevention in the workplace. The implications for positive social change are that the study findings might lead to improving the quality of life of employees and families. Injury-free workers improve the productivity and profits of an organization and contribute to the local economy, while a successful enterprise also offers more employment opportunities, creating positive financial development and improved living standards for the community.

**Nature of the Study**

Using the qualitative method enables researchers to achieve a high degree of subjectivity because these approaches derive from the knowledge and experience of participants (Yin, 2017). The qualitative method was the most suitable method to collect data for insight into the overarching research question: What strategies do manufacturing business managers use to minimize workplace injuries? Yin (2017) noted that a

quantitative method of study is based on statistical analysis to test hypotheses on the relationship or differences between variables. A statistical analysis of variables did not support the purpose of this study. The mixed-methods approach consists of complex data collection and analyzing data, through a sequential transformative process (Makrakis & Kostoulas-Makrakis, 2016). The mixed method approach would not have addressed the purpose of this study because the quantitative aspect of the approach was not needed to answer the question of how to reduce workplace injuries.

Because my aim was to focus on one organization in this study, a single case study design optimally served to research manufacturing business managers' strategies used to reduce workplace injury through interviews, observation, and a review of organizational safety records. Phenomenological researchers analyze specifics of the lived experiences of individuals (Fredette, Mawn, Hood, & Fain, 2016). Since the purpose of this study was not to explore the lived experiences of participants, I did not use the phenomenological design. Ethnographic researchers seek to explore the patterns of behavior of participants in a natural or cultural setting (Morrow, Hare, & Cameron, 2016). Exploring patterns of behavior did not fit the purpose of this study. Researchers using the narrative design focus on the interviewee's personal experiences pertaining to phenomena (Carmichael, Fenton, Pinilla-Roncancio, Sing, & Sadhra, 2016). This design did not fit my focus on a single organization in this study.

### Research Question

The overarching research question for this study was: What strategies do manufacturing business managers use to reduce workplace injuries?

**Interview Questions**

1. What workplace injuries happen the most in your department?

2. What strategies do you use to reduce workplace injuries?

3. What reasons prompted your choice of the favored strategies for reducing workplace injuries in your department?

4. How did the strategies you chose reduce workplace injuries?

5. What challenges have you experienced with implementing your organizational strategies into the work environment?

6. How did you overcome any challenges?

7. What were the results from implementing the strategies?

8. What methods have you used to empower employees to support workplace strategies?

9. How do you measure whether your strategies are successful reducing workplace injuries?

10. What additional information would you like to add to this interview pertinent to reducing workplace injuries that may not have been covered in the interview questions?

**Conceptual Framework**

The conceptual framework for the study is represented by the transformational leadership theory developed by Burns (1978). The postulations of the transformational leadership theory offer an explanation of leadership traits and rest on the premise that motivational and inspirational leaders create a sense of urgency and dedication among

followers and work toward common goals (Burns, 1978). Burns defined the following constructs underlying transformational theory: (a) idealized attributes, (b) idealized behaviors, (c) intellectual stimulation, (d) inspirational motivation, and (e) individualized consideration. Kouzes and Posner (2012) extended Burns' constructs and propositions underlying the theory to include (a) inspiring a shared vision, (b) challenging the process, (c) enabling others to act, and (d) encouraging the heart can empower transformational leadership. As was applicable to this study, the lens of transformational leadership theory served as an additional approach in exploring the data collected on how business managers and leaders in a manufacturing enterprise implement strategies specific to the prevention and reduction of workplace injuries.

Key constructs of the transformational leadership framework for the work environment could create a safety culture to reduce workplace injuries and associated costs. When a leader inspires and rallies employees to fulfill a vision of a safe and injury-free workplace, the outcome may include reduced injuries and increased productivity. When leaders provide employees with a safe environment and train, instill, and ingrain safety measures and strategies by also recognizing and rewarding individual and group achievements, an improved safety culture could develop. When leaders apply transformational leadership principles into the work environment, a culture of trust, comradery, and collaboration could result in a reduction of workplace injuries. A person's leadership style involves some combination of task behavior and relationship behavior (Bass & Avolio, 1990). Task behavior denotes the extent to which leaders are likely to organize and define the roles of the members of a group, while relationship

behavior is the extent to which leaders are likely to maintain personal relationships with an affiliated or assigned group (Bass & Avolio, 1990).

## Operational Definitions

*Employee involvement*: A work design approach for a working system that emphasizes an high level of employee autonomy and decision-making (Benson, Kimmel, & Lawler III, 2013).

*First-line supervisor:* An individual who has supervisory responsibilities for employees closest to the operating core in an organization (Townsend & Russell, 2013).

*Holistic technique:* Researchers that are intersested in engaging and developing the whole person as part of the research process (Hu, Zhang, Wang, & Tian, 2018).

*Manager:* An individual who implements the management process (Boykins, Campbell, Moore, & Nayyar, 2013).

*Nanomaterial:* Materials that measure on the nanoscale (1–100 nm) or materials that contain nanoscale structures internally or on their surfaces (Mordorski, Landriscina, & Friedman, 2016).

*Occupational health and safety officer*: One of a group of specialists and technicians that collect data on analyzing many types of work environments and work procedures (BLS, 2017).

*Occupational safety:* Safety for the workers, employers, and workplace environment (Singh, Singh, & Kaur, 2016).

*Organizational commitment behaviors:* Positive employee behaviors that surpass expectations; the employee takes action beyond normal work roles (Chiang & Hsieh, 2012).

*Transformational leadership:* When leaders and followers make each other advance to a higher level of morality and motivation (Burns, 1978).

## Assumptions, Limitations, and Delimitations

### Assumptions

Assumptions are those sets of preconceived notions that, if left unchallenged, could damage the integrity of the research (Marshall & Rossman, 2016). The underlining assumption I held in this study was that transformational leadership can reduce injuries in the metal manufacturing industry. I also assumed that the use of a qualitative method was appropriate to explore strategies used by metal manufacturing managers to reduce workplace injuries. My assumption that all participants would give honest and truthful answers to my interview questions proved to be valid according to company documents that were provided by the participants. The assumption that the sample size of metal manufacturing managers willing to participate in the study would reflect an appropriate number of qualified participants drawn from the population for the purpose of achieving data saturation needed for the study also proved to be correct.

### Limitations

Marshall and Rossman (2016) explained that limitations involve conditions, events, influences, or shortcomings that the researcher cannot control. As with qualitative research studies that incorporate participants, interviews can be limited to the

participants' bias and memory to recall past events. The answers provided by each participant proved to be limited to their experiences at their present organization. Another limitation of this study was that I only focused on one metal manufacturing business located in the southeastern United States because other types of manufacturing businesses and other geographical locations were excluded.

**Delimitations**

Delimitations refer to the scope and boundaries of a study, as set by a researcher (Patton, 2014). The first delimitation of this study was the type of metal manufacturing business. The research population consisted of three managers of a metal manufacturing business located in the southeastern United States who had successfully reduced workplace injuries as recorded in organizational records. This was a delimitation because expanding the research population to include nonmetal manufacturing businesses could have changed the outcome of the study by introducing different factors like types of injuries that may or may not be common to both businesses. A second delimitation was that the study did not include metal manufacturing businesses in other regions or countries.

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**Significance of the Study**

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**Contribution to Business Practice**

The findings of this study may be important to manufacturing business managers who constantly strive to prevent work-related injuries. The objective of this qualitative case study was to explore the strategies manufacturing business managers can implement to reduce workplace injuries. The findings from this study can offer managers strategies

to encourage employees to recognize safe work practices that prevent workplace injuries. A transformational leader enhances the perceptions of self-efficacy of their followers by communicating high-performance expectations and expressing confidence in followers' abilities to contribute to the mission and goals of their organization (Krishnan, 2012). The implementation of the knowledge produced by this study could help any business, not just those in the metal industry, to develop an organizational culture where employees go beyond performing the minimum job requirements and commit to the organization by suggesting additional ideas that could increase productivity and profitability.

**Implications for Social Change**

The results of this study should be of interest to business leaders who have a goal of influencing positive social change in the manufacturing industry in the southeastern United States. The findings from this study contribute to an understanding of the effective leadership behaviors and skills used by successful manufacturing business managers to reduce workplace injuries. Business leaders can use the study findings to develop programs, policies, and strategies to enhance employee safety behavior in the manufacturing industry. Adequately and well-trained transformational leaders may encourage, motivate, inspire, and heighten the effectiveness of employees to reach safety goals within the manufacturing industry. Effective metal manufacturing leaders may equip workers with the needed skills and behaviors to transform the community into an evolving, safety-oriented society.

**A Review of the Professional and Academic Literature**

My objective with this qualitative case study was to explore the strategies manufacturing business managers used to develop effective leadership styles to reduce workplace injuries. Undertaking a comprehensive literature review of relevant topics, provided me with a scholarly background to support the need to address the problem. The literature review commenced with a search of databases accessed through Google Scholar, Walden University Library, and other libraries with the goal of at least 85% current and peer-reviewed sources. The 85% search criteria was limited to peer-reviewed sources published within 5 years of completion of the study. The literature I reviewed for this study included 159 sources, of which 85% were peer-reviewed within 5 years of my expected completion of my study. I organized the literature review around the following themes: (a) the influence of transformational leadership; (b) the definition and role of a leader; (c) leadership competencies to implement organizational success; (d) training for leaders to create a safe work environment; (e) leadership challenges resulting from common leadership errors that lead to employee mistrust; (f) leadership styles that both support and contrast the transformational leadership theory; and (g) training, programs, and strategies that business managers can use to reduce the financial effect on organizational profitability associated with workplace injuries.

**Themes That Guided the Interview Questions**

From the abundance of literature about leadership and leadership styles, I identified the following leadership themes which helped me develop the interview questions: (a) the interaction between supportive and unsupportive manager behaviors on

employee work (Teoh, Coyne, Devonish, Leather, & Zarola, 2016) and (b) the influence

of any injury prevention program as a function of the program and its implementation

(Teoh et al., 2016). However, real-world implementation of injury prevention programs is

challenging (Donaldson et al., 2016).

Health and wellbeing in the workplace are of paramount importance to

individuals, businesses, and society. The workplace is where people in employment

spend most of their waking hours, and the workplace community is one to which most

adults belong (Carmichael et al., 2016). If leaders are engaged in the best leadership

behaviors, then the leaders' ability to encourage employee buy-in and engagement

increases (Kouzes & Posner, 2012).

**Definition and Role of the Leader**

Peng et al. (2016) explored how the transformational leadership style of CEOs

influenced employees' organizational commitment. The authors focused on building on

the work of Bass and Avolio (1990) and Burns (1978) on the concepts of

transformational leadership theory associated with CEOs intellectual stimulation and

employees' perceptions of work meaningfulness. Peng et al. noted that the importance of

a motivated workforce is one of the human resource management strategies that CEOs

need to achieve their organizational objectives. The findings from their study showed that

the leadership behavior of CEOs could have a cascade effect throughout the whole

organization's performance.

In the metal manufacturing industry, negative leadership behavior could be

devastating to production, profits, and workplace injuries. Afsar, Badir, and Kiani (2016)

explored past research regarding the effect of spiritual leadership upon employees and organizational culture and the effects to improve pro-environmental behavior by employees. The data collected during their study confirmed my assumptions that spiritual leaders have a positive effect on employee behavior by influencing both intrinsic motivation and increased environmental awareness. When a leader can influence followers to think about their own safety, environment, and organizational well-being, society will benefit (Afsar et al., 2016).

Leadership is an important aspect of the social organization that affects the processes of group formation, coordination, and decision-making in human societies (Amornbunchornvej et al. 2016). The ability to identify leaders based on behavior and the subsequent reactions of others opens up opportunities to explore group decision-making. Amornbunchornvej et al. (2016) used a simple yet powerful leadership inference framework for extracting group coordination periods and determining leadership based on the activity of individuals within a group. According to Roberts (2015), of the multiple approaches to leadership, only servant leadership strikes the necessary balance between morality and mission achievement in serving to promote the best interests of key stakeholders (i.e., employees, clients, customers, and the community). Leadership is a relational process that involves leaders and followers (Giessner, Van Quaquebeke, van Gils, van Knippenberg, & Kollee, 2015).

The state of a leader's mind plays a significant role in how relationships are formed between employee and manager. Jin, Seo, and Shapiro (2016) studied the link between a leaders' emotional state and the effect on employees' organizational

commitment. The researchers focused on expanding upon Bass's theory that defined transformational leaders as displaying the four behavioral characteristics of (a) idealized influence, (b) inspirational motivation, (c) intellectual stimulation, and (d) individualized consideration to transform employees into committed, high-performing employees. Leaders who experienced a degree of pleasantness at work were found to engage in positive transformational leadership behaviors that positively fostered employees' performance (Jin et al., 2016). From the case study findings, the researchers noted that a leader's on-going experience of pleasant feelings while at work could nurture employees' commitment.

I compared studies by different researchers who focused on the leader's leadership style, and how the leadership style effected employees' commitment and behavior. Donovan, Salmon, and Lenné (2016) examined different safety leadership styles that helped establish a positive influence on performance. Like Donovan et al., the purpose of this study was to explore the influence of leadership style, but I focused on how it made a difference in reducing workplace injuries in the metal manufacturing industry. Barnes, Guarana, Nauman, and Kong (2016) reconducted a study on the relationship between a leader's emotional effectiveness in regards to employee's safety perception resulting from sleep deprivation. They found that the human element is the focus of both the leader and employee, and how a leader functions when tired from lack of sleep can significantly affect safety.

Researchers have explored leaders' relationships with employees by working on the assumption that all employees have the right to work in a safe and healthy

environment (Taufek, Zulkifle, & Kadir, 2016). Taufek et al. (2016) revealed that there is

a positive relationship between safety and health practices and injury management. One

of the important facts they revealed was that safety training for both managers and

employees is the success of any safety and health program.

**Leadership Competency Needed for Organizational Success**

Business leaders need to educate themselves on the best leadership practices to be

successful. Looking at the relationship between leaders trained using action learning

principles and authentic leadership (AL), Baron (2016) focused on a 3-year training

program to evaluate if training could develop effective authentic leaders to improve

organizational performance. Baron indicated that AL is a new theory expanding on

transformational leadership principles and that the findings showed authentic leaders can

be developed using action learning principles.

Focusing on supervisor competencies for supporting a return-to-work (RTW)

process for injured workers, Johnston et al. (2016) aimed to determine the competencies

supervisors need to facilitate a worker's RTW following absence due to a mental health

condition or a musculoskeletal disorder. The data collected during their study yielded

critical information as to the need for frontline supervisors to process skills that will

support returning injured workers. Johnston et al. also noted the importance of leaders

learning and using the correct leadership skills, which can allow a reduction in worker's

compensation cost and an increase in profits.

Song et al. (2016) studied the relationship between the implementation of job

rotation and the reduction of workplace injuries. The researchers observed that leaders

should schedule jobs systematically so that the physical workload was evenly distributed with the use of various body parts. They recommended that the job rotation process should aim to minimize musculoskeletal disorders with the approach of decreasing the overall workload. Song et al. further suggested that when leaders use the correct job rotation process it would be beneficial in developing a job rotation schedule aimed at minimizing workload across body parts for returning injured workers. Metal manufacturing leaders armed with information from studies like those of Song et al. could reduce workplace injuries, help increase production, and boost profits.

For leadership to be successful, one imperative is to implement human resource management activities focused on improving employees' knowledge, skills, and abilities to gain their genuine support (Hu, Zhang, Wang, & Tian, 2018; Mohd-Shamsudin & Chuttipattana, 2012). Employee support can be developed when leaders are engaged in effective leadership behaviors that enhance their ability to gain an employee's engagement for organizational success (Kouzes & Posner, 2012).

Dahl and Olsen (2013) suggested that the connection between a leader's safety exertions affects employee perceptions by following the rules. Newnam and Oxley (2016) researched the relationship between supervisor and company drivers in an effort to reduce the injury rate among company drivers through training. One program identified during their study was the safety management for the occupational driver (SMOD). Leaders who had received SMOD experienced a reduction in driver workplace injuries (Newnam & Oxley, 2016). The SMOD program clarified the role of a leader in the safety management of drivers and helped in identifying methods of (better) integrating safety

management within existing work role tasks (Newnam & Oxley, 2016). SMOD created leaders who were aware of and attentive to a workplace context in which safety was valued and could identify situations that reinforced the level of concern for the health and well-being of drivers (Newnam & Oxley, 2016). Programs like SMOD could be adapted to other industries, such as the metal manufacturing industry, to help reduce workplace injuries and improve worker health and well-being.

Peng et al. (2016) studied the relationship between leadership styles and changes in peer behaviors concerning customer service. In their study, transformational and ethical leadership styles yielded positive results among participants. Peer leaders employing the transformational techniques were able to see a positive influence on peers' belief in service quality adherence and service performance (Peng et al., 2016). Building on the research undertaken by Peng et al. with this study, I hoped to provide a business strategy that could help metal manufacturing leaders reduce workplace injuries. Leaders who used tenets of ethical leadership style strengthened the normative beliefs of peers by communicating and reinforcing social expectations for engaging in desired behaviors and refraining from undesired behaviors (Peng et al., 2016). Leaders who model ethical behavior inspired peers to behave in a manner that benefited the followers themselves, the organization, and the community (Peng et al., 2016).

Mattson, Hellgren, and Göransson (2015) researched how the communication skills of leaders influence some employee behaviors. The relationship between the leader's appreciation and communication of safety processes could be used to develop an organization's programs on injury prevention and safety (Mattson et al., 2015). The two

communication themes developed in their study included: leader safety priority

communication and feedback to subordinates developed during the study. These methods

were assumed to affect safety outcomes via different employee behaviors (Mattson et al.,

2015).

Phaneuf, Boudrias, Rousseau, and Brunelle (2016) conducted a study on the

relationship between personality and transformational leadership (TL) using theoretical

models to develop a contextualized comprehension of antecedents of TL behaviors. The

two theories they focused on were trait activation theory, which states that some

situations allow particular leaders personality traits to emerge to meet the conditions, and

in some instances the leaders personality traits was affected by the type of relationship

the leader had with the group. Their findings revealed that personality traits that match

transformational leadership could have a positive influence in a situation that enhances

the metal manufacturing leader's personality, leading to reduced workplace injuries.

To study the relationship between transformational leadership and followers'

work engagement, Zhu, Avolio, and Walumbwa (2016) looked at worker engagement

associated with TL and the positive worker characteristics of creativity, innovation, being

proactive, taking initiative, and being enthusiastic to learn. The researchers built on the

concepts of Bass and Avolio (1990) and Burns (1978) focused on the idea that the goal of

a leader is to ameliorate and elevate followers' potential in providing for higher order

needs. In this study, my aim was to continue building upon the same assumption and

study how transformational leaders can cultivate employees' behavior to work safer

while maintaining productivity. Transformational leaders can also create an environment

of positive worker engagement through stimulating ownership, offering opportunities for personal and professional growth and training, and encouraging followers to challenge themselves to reach higher levels of goal attainment (Bass & Avolio, 1990).

One method to create worker ownership is to implement a program like 7-S throughout the organization. Zentner (2015) analyzed McKinsey's 7-S Model approach to change involves the integration of seven factors, which are categorized in two categories of hard and soft elements. The hard element category includes strategy, structure, and systems. The soft element category includes skills, style, staff, and shared values. Theoretically, by using elements of 7-S combined with transformational leadership style metal manufacturing leaders could create or improve organizational safety culture, which could reduce workplace injuries. During the data analysis of themes developed from interviews, I compared or contrasted McKinsey's 7-S factors against my findings.

Srinivasan, Ikuma, Shakouri, Nahmens, and Harvey (2016) reviewed the effects of the Lean Tool 5S on organizational safety climate. The 5S program combines lean principle, sort, set in order, shine, standardize, and sustain with safety to produce a reduction in workplace injuries. For years, housekeeping and how material is organized have been critical causes of workplace injuries. The purpose of Srinivasan et al.'s study was to determine if 5S programs would improve production and safety. A pretest and posttest safety climate questionnaire were administered to determine how effective 5S would be. The results from pre and post data collection revealed that 5S improved the safety climate of the workers. The 5S program also improved the cycle time, area floor

utilization, and inventory held up as well as improved management's commitment and involvement in improving the safety climate. As part of the data analysis phase, I compared, and contrasted strategies discussed during interviews to determine the 5s programs was used to reduce workplace injuries.

**Transformational Leadership**

Hasson, von Thiele Schwarz, Holmstrom, Karanika-Murray, and Tafvelin (2016) evaluated whether training managers at workplaces could improve organizational learning. Managers play a role in providing opportunities to employees for learning. The goal was to study methods to improve line managers' transformational leadership behaviors and, in turn, improve organizational learning. The options of line managers' and the perceptions of subordinates on organizational learning were measured with the Dimensions of Organizational Learning Questionnaire and with postintervention single items on organizational learning.

Hasson et al. (2016) noted that leaders trained in transformational leadership had positive effects on managers' perceptions and on employees' perceptions of organizational level aspects of organizational learning. Sun, Gergen, Avila, and Green (2016) conducted a meta-analysis of literature specific to the correlation between leadership and job satisfaction. Sun et al. concluded that charismatic and transformational leadership behaviors had the highest positive correlations with worker job satisfaction while noncontingent punishment and abusive supervision showed low negative relationships to worker job satisfaction.

Hillen, Pfaff, and Hammer (2015) examined other high-hazard industries and tested a hypothesis that transformational behavior would positively influence the frequency of events reported by staff on the front line of service provision. The researchers' data confirmed that leaders equipped with qualities associated with transformational leadership proved to be a positive influence in raising employees' patient care. During the course of the study, a reoccurring theme developed that when senior leaders exhibited transformational behavior while interacting with subordinates yielded improved patient care and well-being. Schmitt, Den Hartog, and Belschak (2016) explored the role of work engagement as an effective–motivational mechanism through which transformational leadership may relate to proactive behavior. The results of the researchers' data revealed that leaders that display attributes of transformational leadership created a positive influence on their employees' proactive behavior.

Although researchers studying safety have traditionally focused on ways to improve employee compliance with safety rules and policies, many have recognized the important function of employee participation in safety initiatives (Guo, Yiu, & Gonzalez, 2016). Safety compliance by definition concerns the performing of required safety-related behaviors (i.e., donning personal protective equipment). Safety participation reflects extra-role behaviors (i.e., organizational citizenship or stewardship behaviors) that go beyond mere compliance to improve safety within the workplace setting (Jiang & Probst, 2016).

Parker et al. (2016) explored the relationship between using lockout/tag out (LO/TO) and workplace injury rate in small businesses. Researchers used the National

Machine Guarding Program in small machine shop business to determine if a statistical difference existed in workplace death/injuries and LO/TO programs and found substantial and statistically significant improvements in machine shops that implemented an LO/TO program. Park et al. showed that the LO/TO programs could be inexpensive to implement which would make it more likely for small business owners to use. In the metal manufacturing industry, implementing LO/TO program would help in creating and maintaining workers' participation in a safety program.

Von Thiele Schwarz, Hasson, and Tafvelin (2016) explored leadership training that combined transformational leadership and applied behavior analysis. The researchers focused on four areas of measurement: (a) transformational leadership, (b) contingent rewards, (c) Management-by-Exceptions Active, and (d) safety self-efficacy, and indicated benefits and improvement from leadership training. Glass, Hanson, Laharnar, Anger, and Perrin (2016) conducted research that indicated when training leaders in conformance with the tenets of transformational leadership principles, a safe and productive work environment could develop for both employee and the organization. As part of providing a safe work environment, leaders could benefit from intimate partner violence (IPV)/domestic violence training and workplace safety. A leader who combines IPV and workplace safety training could combat the growing problem facing business leaders in how to deal with nonworking injuries that affect on-the-job safety and productivity (Glass et al., 2016).

Qu, Janssen, and Shi (2015) examined follower relational identification with the leader as a mediator, and follower perceptions of leader creativity expectations as a

moderator in the relationship between transformational leadership and follower creativity. The researchers noted the importance for supervisors to show interest in the well-being and safety of followers, to build a foundation of safe work habits. Supervisors trained in the constructs of transformational leadership would prove beneficial to employees by enabling the embankment of a lifetime of safe and healthy employment (Zierold, 2016).

**Leadership Challenges**

Leaders face challenges when deciding to start and manage a new safety project. Bruk-Lee, Nixon, and Spector (2013) identified three types of conflict at work, task, relationship, and non-task to predict its effect on employee strain. In the first category task is a common source of workplace stress, most if not all employee becomes stressed when a personally assigned task is changed, increased, or decreased. The second conflict comes in the form of the working relationship. The conflict could cripple an organization, notably when personalities clash. The third type of stress is nontask stress, which can lead to low morale and high workplace injuries and organizational turnover.

Satterwhite, Sheridan, and Miller (2016) explored time management in regard to how leaders react when faced with the challenges of meeting deadlines. In their study, the case was made for training leaders to increase their comfort with and responsiveness to extended timescales. From the data collected during the study, the researchers noted that business leaders must be able to cope with and manage time pressures. In the metal manufacturing industry, time management is essential to production, creating stress at all levels of the organization.

Eatough, Chu-Hsiang, Miloslavic, and Johnson (2011) studied the effects of three role stressors regarding organizational behavior. The role stressors were role ambiguity, role conflict, and role overload. As a leader, there is a need to have a good understanding of these types of stressors when it comes to making decisions. Role ambiguity is the vague and unclear expectations set for employees, such that these individuals are uncertain as to what is expected of them, which could lead to low or no productivity and injuries. Role conflict is the simultaneous contradictory expectations from work colleagues that interfere with one another and make it difficult to complete work tasks. A leader will need to act quickly to eliminate role conflict by establishing clear lines of command. Role overload is reflective of situations in which employees think that they have too many responsibilities or activities expected, given the time available, their abilities, and other constraints, connoting, that as a leader having knowledge of employee's strengths and weakness could eliminate this type of stress. Metal manufacturing leaders could benefit from training in the area of role stressors when implementing a safety program.

Fonseca, Gomes, and Barros (2012) using survey data identified areas of organizational stress, that leader should consider when developing strategies to prevent workplace injuries. The researchers focused on areas of stress notably dissatisfaction, demotivation, illness at work, and the defensive strategies workers used to negotiate between individual interests, needs, and organizational goals. Fonseca et al. emphasized the importance of focusing on the daily performed by the workers, which involves a high human cost and may be covering up problems that might cause future accidents or an

increase of workers illnesses rates. Surveys used in these two cited studies could help metal manufacturing leaders eliminate the ivory tower mentality thereby significantly reduce and possibly eliminate workplace injuries, to thereby improving productivity.

According to Manapragada and Bruk-Lee (2016), a challenge facing leader at all levels is a communication breakdown between employees and supervisors about safety-related issues. The researchers focused on maximizing opportunities for leaders who received information from employees about safety issues and acted upon the information to correct the problem. From the data analysis, the four reasons for employee communication silence about safety issues included employee perceptions of altering relationships with others (relationship-based), and employees' perceptions of the organizational climate (climate-based). The next two communication issues were the employees' assessment of the safety issue (issue-based) or characteristics of the job (job-based). Metal manufacturing leaders trained on the importance of transformational leadership could potentially remove communication barriers identified in the research of Manapragada and Bruk-Lee, creating a healthy safety culture.

Kunyk et al. (2016) conducted research to gained insight into organizational leader's receptivity to implementing the National Workplace Psychological Health & Safety Standard (NWPHS). The NWPHS has 13 psychosocial risk factors identified. The factors included organizational culture; psychological support; clear leadership and expectations; civility and respect; psychological job demands; growth and development; recognition and reward; involvement and influence; workload management; engagement; work/life balance; psychological protection from violence, bullying, and harassment and,

protection from physical harm. These researchers showed that transformational leadership theory connection to each of the 13 psychosocial risk factors, because of the foundation of transformational leadership theory is the focus on caring for the whole man. Kunyk et al. revealed that participants acknowledged the need for the standard, but each industry faced unique challenges when it came to implementation.

The information within Kunyk et al. (2016) study could benefit metal manufacturing leaders to adopt psychological health and safety standards in safety programs. The emphasis of the literature review was to seek knowledge from a review of an extensive body of literature that may be applicable to the metal manufacturing industry. The findings and discoveries of the proposed study may serve to bring awareness to the need for leaders to focus on the workers when making business decisions.

Brogli (2016) identified five key steps to improving and managing safety. First management must establish a team to evaluate the organizations' safety performance based on three categories: culture, compliance, and capital. Culture is important in establishing any safety programs for leaders, owners, and worker behavior toward safety is the foundation of any program. There must be rules for conducting business to prevent a reckless type of atmosphere, which breeds injuries and even death. The team must next develop and outline the scope of the safety program, unique to all identified stakeholders. The next step for the team is the establishment of compliance and assessment, by conducting a risk assessment to evaluate hazards for which safety programs need to address. The team must develop a plan of implementation for the safety program. The

final step is verification, validation, and follow-up, that the program meets all needs and requirements for success. By using key safety performance indicators like employees' behavior, organizational compliance, and resource availability a leader could gauge their organizations' safety culture to identify areas for improvement (Van Nunen, Reniers, & Ponnet, 2018).

In the metal manufacturing industry, the use of machines in the workplace has been around for ages in production, but the use of robots to reduce injuries is new. Zanchettin, Ceriani, Rocco, Ding, and Matthias (2016) explored the relationship between human-robot collaboration and improved safety. The uses of robots in the manufacturing industry have been around, but the combination of employee and machine to reduce injury is a new business strategy. The researchers studied the effectiveness of robots performing a redundant task to maintain productivity while reducing the chance of human injury. The findings indicated that human-robot collaboration was both productive and beneficial to shop safety, as long as the employee adhered to strict control strategies. The increased use of robots in the workplace has created a new environmental issue that could affect workers and workplace injuries.

Chinniah (2015) explored the reasons for serious and fatal injuries resulting from machinery's moving parts. Data from 106 accident reports related to moving parts of machinery from the province of Quebec in Canada were collected and analyzed. The areas of concern included easy access to moving parts of machinery, lack of safeguarding, and the absence of lockout procedures. The inexperience of workers, bypassing safeguards, lack of risk assessment. Chinniah noted the lack of supervision,

inadequate machinery design, unsafe working methods, and no clear instructions to workers on how to intervene safely on machinery, modifications to machinery and to control systems as challenges. Chinniah concluded that it is not sufficient to perform a machinery risk assessment, but it takes an experienced and knowledgeable leader, safety procedures, and training to prevent and reduce moving machinery part injuries.

Schulte et al. (2016) examined the relationship between climate change and worker safety and health. The framework for the study was based on a 20-year span (1988-2008) review of literature that identified seven hazards associated with climate change. Five of the seven hazards were associated with the environment with temperature increases and decreases as some of the most common occupational hazards workers face daily. Air pollution ultraviolet exposure, extreme weather, and vector-borne diseases and changing habitats each have unique hazards to when planning jobs or tasks. The last two hazards related to business management decisions that can introduce stress upon the workers that could lead to increases in injuries because of distraction. The researchers also studied three new hazards that a leader will need to account for mental health, economic burden, and climate intervention. Leaders should consider four areas when developing a safety program; climate change surveillance, risk assessment, risk management, and policy development to prevent the worker from harm (Schulte et al., 2015).

Brenner, Neu-Baker, Eastlake, Beaucham, and Geraci (2016) used a nanomaterial exposure assessment technique to explore the health and safety of workers' exposure while working with metal. Extensive sampling was conducted using a combination of

filter-based sampling and direct-reading instruments for the exposure assessment. The researchers' findings provided information for organizational management with detailed measurement as to how the hazard communication, engineering controls, and standard operating procedures implemented supported health and safety programs. Management's commitment to time and resources associated with conduct exposure assessment could improve employees' organization and safety commitment, which could improve productivity and job satisfaction.

Leadership and job satisfaction is a challenge facing manufacturing business leaders in business environment concerning reducing workplace injuries. In this proposed study, the aim is to explore the relationships between leadership styles and job safety focusing on the impact of both positive and negative results. Smith, Eldridge, and DeJoy (2016) suggested, evidence that safety-specific transformational leadership positively influences safety outcomes including safety climate and safety behaviors. Sampson, DeArmond, and Chen (2014) used an action theory framework to explore the relationships between occupational safety stressors and safety performance. How leaders communicated and displayed support in both work activities and nonwork activities affected stressor and safety compliance and participation relationships. The researchers suggested that positive communication by leadership in the areas of safety uncertainty, safety obstacles, safety performance, and safety participation could lead to an improved safety culture.

Singh et al. (2016) explored the challenges of occupational safety as defined as safety for the workers, employers, and workplace environment. The study findings

indicated areas for improvement that can reduce workplace injuries. The researchers identified management involvement first in the area needing improvement along with training. Training was the foundation for workplace safety and reducing injuries. Leadership training can equip these individuals with the tools needed to influence the safety culture effectively. To go along with leadership training, educating each member of the organization with site-specific training can reinforce safety.

One challenge faced by leaders tasked with implementing a safety program is the support of upper management. Tong, Rasiah, Tong, and Lai (2015) researched Occupational Health and Safety (OH&S) Officer's perceptions of the relationship between leadership empowerment behavior (LEB) and psychological empowerment (PE) leading to safety teamwork with the production team. The researchers noted, that OH&S officers performed jobs efficiently when empowered to enforce safety programs, especially when management showed confidence in the ability of these officers to perform assigned tasks and jobs. Nielsen, Skogstad, Matthiesen, and Einarsen (2016) used a temporal research design to study constructive and destructive forms of leadership, the relation of leadership over time, and leadership and safety potential bi-directional associations. The need for risk-taking study revealed five themes for employee risk-taking; acceptance of risks, individual responsibility, trade-off, (sacrificing safety for meeting production deadlines) communication, priority, and external conditions (Nordlöf, Wiitavaara, Winblad, Wijk, & Westerling. 2015).

The underlying worker consensus was that safety is an individual's responsibility. Nordlof et al. (2015) noted that workers struggle with what leadership says, i.e. Safety is

the primary focus, and deliveries must be made no matter what. Ford and Stephens

(2018) explored the influence of both employees and organizational factors like engaging

in on the job safety conversations, possessing self-efficacy, and employees' willingness

to respond appropriately to encountered risk as areas a leader will need to consider when

implementing a safety program. Zwetsloot et al. (2017) explored the relationship between

Zero Accident Vision (ZAV) program and general safety improvement linked to

leadership commitment. The researchers focused on the assumption of ZAV and the

challenge that all accidents are preventable, by a serious commitment from leadership to

create and ensure a safe work environment. The goal was to expand the empirical

research and knowledge for support of implementing ZAV using leadership styles.

Another challenge faced by leaders is personality conflicts. Way, Jimmieson, and

Bordia (2016) explored the relationship between supervisor conflict management style

(CMS) employee bullying, depression, and workers' compensation claim. Some

examples of conflicts a leader may face would be employee harassment, and employee

lack of engagement because of external problems. As part of dealing with the total

employee, tools like CMS can benefit the employee, organization, employee's family,

and the community. Leaders in the metal manufacturing industry may find

transformational leadership suitable to equip employees with tools suited to deal with

nonoccupational issues like drug use that could affect workplace safety.

Spicer and Miller (2016) studied programs to prevent substance abuse in the

workplace that could lead to workplace injuries. The focus of the research was to

determine if programs like Personal Responsibility and Values: Education and Training

(PREVENT) program, initially designed for the United States Navy could influence an organization's safety culture associated with substance abuse. The findings from this study indicated that the PREVENT participants consumed 56% fewer alcoholic drinks and reduced the number of the days in which they consumed alcohol by 32% after attending the program. Programs like PREVENT can provide metal manufacturing leaders as well as workers with tools that can help recognize at-risk behavior that may lead to injuries.

Another challenge faced by leaders is nonoccupational issues such as a lack of training. Kao, Spitzmueller, Cigularov, and Wu (2016) researched the effects of leadership engagement concerning insomnia and workplace injuries. Some statistics revealed during the research showed workers who suffered from insomnia had a 4.5% higher risk of injuries to normal sleeping workers yielding 13% of the variance in work injuries. With such potentially high risk of injuries associated with insomnia, the researchers identified training leaders to recognize signs of sleep disorder. Through training, a leader can offer help to the worker in the form of programs for a sleep disorder, reassign job task, and even implement a buddy system (Kao et al., 2016). The transformational leader, displaying the propensities, skills, and attributes to inspire and engage their followers. In retrospect, leaders who lack proper leadership training could create an environment that leads to workplace injuries. Spehar, Sjovik, Karevold, Rosvold, and Frich (2017) researched the effects of introducing leadership into a general practice that lacks formal management training and their reliance on ad hoc solutions for solving leadership challenges, which sometimes results in workplace injuries. A

challenge for metal manufacturing managers is managing workers who have been injured. Even with the best efforts of leadership to provide safety programs, no safety program alone can prevent workers from workplace injuries.

A challenge for metal manufacturing managers is managing workers who have been injured. Even with the best efforts of leadership to provide safety programs, no safety program alone can completely prevent workers from workplace injuries. The studies from different researchers and practitioners have indicated why transformational leadership training is so important when trying to reduce or eliminate workplace injuries. Brendbekken et al. (2017) found value in assessing the relationship between multidisciplinary intervention (MI) the organization offers programs like employee assistant, internal external counseling programs, and brief intervention (BI) providing only one or two programs on Return To Work (RTW) for workers with musculoskeletal injuries. Musculoskeletal injuries are in both frequency and cost that a leader or manager deals with regularly. The focus was to determine if MI or BI programs would be beneficial to both the worker and the organization. Brendbekken et al. indicated no significant difference between MI and BI programs; however, workers who participated in the MI program increased RTW status to 7 months compared to BI participants who took the full 12 months before returning to work. The 5-month early RTW could be the difference between a productive quarter or incurring further expenses from the injury.

**Leadership Styles**

Boies, Fiset, and Gill (2015) examined the relationship between transformational leadership (TL) and team performance and creativity. The researchers noted four

dimensions of TL, idealized influence, inspirational motivation, individualized

consideration, and intellectual stimulation. Of the four dimensions of TL, focused on

inspirational motivation and intellectual stimulation as the links to predicting team

outcomes on task performance and creativity. Boies, Fiset, and Gill (2015) noted that

leaders would need to use different dimensions of TL depending on the desired team or

individual performance and creativity sought. Leaders in the metal manufacturing

industry could benefit from the four noted dimensions of TL when implementing a safety

program by encouraging workers' creativity to enhance the program establishing

ownership.

Deinert, Homan, Boer, Voelpel, and Gutermann (2015) examined the links of

subdimensions of transformational leadership and leader personality and performance.

The focus on the big five personality traits, neuroticism, extraversion, openness to

experience, agreeableness, and conscientiousness is for manager to recognize the

personality traits that could help match developing leaders transformational leadership

sub-dimensions, idealized influence, inspirational motivation, intellectual stimulation,

and individualized consideration, provided understanding of the issues relevant in the

modern, changing, and uncertain work environment that makes positive influences.

Investing in hiring the right individuals and leadership development training will

facilitate personality traits to produce a positive influence when combined with TL

subdimensions (Deinert et al., 2015). Boer, Deinert, Homan, and Voelpel (2016) explored

the effects of transformational leadership and leader-member exchange and the outcomes

within the organizations in the area of safety. Burns theory related to transformational

leadership has key constructs in behaviors, within the group. Boer et al. focused on the one-to-one relationships between leaders and followers in three areas, employee job satisfaction, employee commitment, and leader effectiveness when implementing new safety programs.

Hong, Cho, Froese, and Shin (2016) developed and empirically tested a conceptual model, based on the culturally endorsed implicit leadership theory. The focus of these researchers was to comprehend differences in the relationships between consideration and initiating structure leadership styles and effective organizational commitment for the U.S. and Korean employees. Gotsis and Grimani (2016) studied the relationship between servant leadership and employees' perception of inclusion. The focus of the study was about how servant leadership style could positively influence the emotional state of employees in increasing the sense of belonging. The researchers' findings revealed that organizational leadership needed to support practices that address employee needs for belonging and uniqueness. Leaders who display servant leadership qualities can create an atmosphere of inclusiveness by empowering diversity and fostering equality within the organization.

Jiménez, Winkler, and Dunkl (2016), perused the health-promoting leadership behavior (HPLB) and the effects of the working environment in a study. Jiménez et al. focused on identifying components of health-promoting leadership that were positive influences. There were four characteristics talked about in the study: personal leadership practices, decision latitude, professional development opportunities, and workplace quality, which combine a leader's traits and organizational aspects to develop a healthy

organizational culture. The development of a specific instrument helped to measure health-promoting leadership behaviors, focusing on six areas of work life and health awareness health-promoting leadership conditions. A two-part questionnaire was used to collect data. The first set of data collected was the employee's point of view and the second set of data collected was the leader's self-assessment. By analyzing both sets of data, Jimenez et al. validated the effects of HPLB that as a leadership style that could be used by any business looking for a positive health and safety change. The lessons and findings can be applied to the metal manufacturing industry, as the ongoing quest to reduce and prevent workplace injuries represents a continuous challenge.

Employee's perceptions of the commitment of management to safety correlated with safety behaviors (Guo et al., 2016). The findings indicated the importance of management commitment to safety, and the lack of commitment could be detrimental to the entire organization. The influence of leadership style echoed throughout the study and possibly validated theories of a similar disposition to the principles of transformational leadership, the application, and manifestation of which can positively change every aspect of an organization's culture. Gotsis and Grimani (2016) expanded upon past empirical research on leadership style by focusing on the human need to be a part of something or someone using the tenets of servant leadership. For the purpose of this proposed study, the research of Gotsis et al was used to facilitate the construction of an empirical map to study the insights and influence of transformational leaders on reducing workplace injuries in the metal manufacturing industry.

Jiang and Probst (2016) examined if the positive relationships between safety knowledge, motivation, and safety participation are contingent on transformational and passive forms of safety leadership. The imperative, which emerged from the findings, was that management needed to exemplify and model the expected behavior, to reinforce safety focus, and the absence or lack of these practices and behaviors could lead to a lack of employee safety commitment, which could be detrimental to the whole organization. Zinko, Furner, Prati, Heyden, and Tuchtan (2016) examined the effects of leadership that gained a negative reputation stemming from a lack of concern for employee safety. As part of the study, a series of hypotheses were tested to understand better the motivation behind developing a negative reputation. Some of the areas of focus were personal career development and organizational reputation as viewed by the employees. Zinko et al. revealed that leadership that earned a good reputation could have a positive effect on both individual and organization, while a negative reputation adversely affects one or both.

Safety is a concern even in small and medium-sized organizations. Mesu, Sanders, and Riemsdijk (2015) noted the positive influence of transformational leadership when combined with the directive or participative leadership in small and medium-sized organizations. The focus of the study was on understanding organizational commitment in relationship to a transformational leadership style in small to medium firms. The study results upon analysis and interpretation indicated that transformational leadership had a positive effect no matter the size of the business, but the directive leadership style worked better that participative in small to medium firms. Extending the theme of the influence of transformational leadership, the study of Boehm, Dwertmann,

Bruch, and Shamir (2015), provided insights into the (CEO) charisma on the performance

of an organization to implementing and ensuring worker safety. The focus was to explore

how CEOs charisma created a climate that encouraged transformational leadership style

and increases organizational identity strength. The effects of the CEOs behavior will

invariably set the tone for leaders from all hierarchical levels to positively affect the

whole organization. The type of leadership style displayed by individuals who make a

decision will usually set the tone of the companies' safety culture. Transactional

leadership is defined as the exchange of value between leader and subordinates, to

advance respective personal agendas (Northouse, 2013). This type of leader brings to

mind an old Saturday morning television show, "Our Gang" when Alfalfa tied a piece of

meat to a stick to encourage the gang's Bulldog to pull him around in a wagon. Unlike

transactional traits, transformational leadership is defined as the attribute and ability of

the leader to engage with others and fosters a connection that increases the level of

motivation and morality in leader and follower (Northouse, 2013).

　　　The theme of motivation is relevant to this proposal, and Achim, Dragolea, and

Balan (2013) have defined motivation as a set of the needs of individuals that require

being satisfied and pushes, invites, and causes someone with a motivational and

inspirational disposition to perform a series of actions to increase that level of

satisfaction, to spur an increase in performance and goal attainment. From an exhaustive

review of leadership, shows that different leadership styles can positively influence

human behavior. Tariq and Ding (2018) explored the relationship between abusive

leaders and employees' work behaviors in the area of safety. Tariq and Ding found that

abusive leadership style produced a negative employee behavior in productivity, safety, absenteeism, and increased worker turnover. Abusive leadership style should be avoided if an organization is to be profitable and sustainable. Leaders should strive to positively motivate their employees especially in the area of safety. Motivation is getting people to do what you want because they want to do it for themselves. The conclusion also is drawn from a review of, literature is that the metal manufacturing industry could benefit from the transformational leadership theory, as ethical and moral values could place value on employee satisfaction and advancement, which can help to grow the business and change the safety culture.

Fyke and Buzzanell (2013) noted that ethical leadership could address the unethical and unjust behaviors by leaders that tend to have a trickle-down effect within an organization; if a worker were unfairly treated, the worker would be more likely to behave unethically. An example of the trickle-down effect is the Enron scandal were employee lost their pension. The unethical behavior workers could lead to an unsafe act that could undermine safety. Fyke and Buzzanell suggested that ethical leadership is the explicit manifestation involving befitting conduct, in which a combination of personal actions and interpersonal relationships, influences followers to similar behaviors, for which two-way communication, reinforcement, and decision-making are essential.

Kark, Katz-Navon, and Delegach (2015) suggested the existence of a relationship between transformational and transactional leadership and employee safety behaviors. The research findings stemmed from the linking of leadership theory with self-regulatory focus theory, using a model of dual effects of leadership on safety initiatives and safety

compliance behaviors as mediated by promotion and prevention self-regulations. Transformational leadership made a more positive influence on employee safety behaviors than transactional leadership in fostering improved safety. One aspect needed for fostering an improved safety culture is a leaders' ability to raise their employees' self-awareness of established mental models of safety.

Weller, Boyd, and Cumin (2014) explored the idea of improving team performance by building mutual trust, communication, and mental models. The foundation of the research was team leadership, mutual performance monitoring, backup behavior, adaptability, and team orientation. From the data collected the researchers revealed that a shared mental model in each of the above-mentioned areas is a critical requirement for effective team performance. Defined policies and procedures must be shared throughout the organization, enabling each team and team member to understand the organizational plan, knowledge of their role and the roles of fellow team members, and most important all members thinking similarly (Weller et al., 2014). The researchers' findings indicated that organizational performance improved when leadership recognized that mutual trust, communication, and team structure are the solutions to individual, departmental, and corporate performance success.

Heslin and Keating (2017) explored the relationship between derailing and enabling mindsets in leadership development. The researchers focused on the effects of negative mental models within an organization trying to improve leadership performance. Working on the theory that leaders can be made, the mindset of the individual is the basis from which a leader must learn and improve. If the leader's mental model (I will never be

more than what I am) is one of low or no self-esteem their ability to grow and improve performance as well as influence others to set and achieve high goals is hindered. Such detrimental thinking in a leader can lead to low performance, which will influence employees' behavior, performance, productivity, and safety. Heslin et al. indicated that organizational leadership must establish an atmosphere that facilitates leaders to learn and grow in a mindset of positive self-motivation, which will lead to a cascade effect in performance for all stakeholders.

## Transition

The background of the problem was introduced in Section 1, which includes the foundation of the study. The problem statement derived from a review of the literature and industry data may indicate the rationale for the study, and the purpose statement reflective of the aims and importance of this study. The details in Section 1 also included the nature of the study, the research method and design, the research question and interview question. The reader was further introduced to the conceptual framework; operational definition, assumptions, limitations, and delimitations. The significance of the study presented herein provided implication for positive social change and contribution to business practice. The review of the literature included a discourse on the potential value of using the principles of transformational leadership in the metal manufacturing industry. The focus of the literature review was on researching and analyzing pertinent literature related to views on strategies that could reduce workplace injuries and increase productivity and profitability.

In Section 2, there will be a description of the role of the researcher serve to present specific associated details to the reader regarding study participants, ethical research, research methodology and design, population and sampling, data collection instruments, and organization techniques, data analysis techniques, reliability, and validity. Section 3 includes the results of the study, a detailed presentation of the findings, application to professional practice, implications for change, recommendation, reflections, and conclusion.

Section 2: The Project

**Problem Statement**

Globally, 2.3 million deaths per year can be attributed to occupational injury or work-related diseases, with the highest workplace injury rate occurring among organizations with employees with less than 6 months of work experience (Lay et al., 2016). Medically recordable workplace injuries cost employees, companies, and insurance companies an annual average of $37,000 per injury (Center for Disease Control and Prevention, 2015). The general business problem was that workplace injuries have an adverse financial effect on organizational profitability. The specific business problem was that some manufacturing business managers lack strategies to reduce workplace injuries

**Purpose Statement**

The purpose of this qualitative case study was to explore the strategies that manufacturing business managers use to reduce workplace injuries. The targeted population of three manufacturing business managers who were successful in reducing workplace injuries at one metal manufacturing company with seven plants located in the southeastern United States. The target group of business managers was applicable for this study because managers guide the procedures used for accident prevention in an organization. The implications for positive social change are that the study findings may lead to improving the quality of life in employees' families. The knowledge generated from this research may also contribute to accident prevention and a safer workplace,

leading to organizational success and the ensuing contribution to the community, the local economy, and an increase in employment opportunities.

## Role of the Researcher

My role as the researcher entailed ensuring that research participants were respected and voluntarily consented to participate in this study in accordance with *The Belmont Report* principles and protocol for conducting research. The foundation for *The Belmont Report* is rooted in three basic principles: (a) researchers must have respect for the persons, (b) researchers must use research methods that will maximize potential benefits and minimize risks to the participants (i.e., the researchers must do no harm), and (c) researchers must ensure equal distribution of the benefits and burdens of research (Fisher, 2011). Some of the strategies that can help to mitigate bias in a qualitative study include reflexivity, the bracketing of personal views and experience from participant views, and reporting disconfirming evidence (Finlay, 2014). As the primary instrument in this study, I made a conscious effort to decrease my own take-for-granted attitude and set aside my own mental model that I had developed to understand the participants' experience. Sutherland, Dawczyk, De Leon, Cripps, and Lewis (2014) argued that in qualitative research, the researcher is a part of the data collection and research instruments because this individual develops the research questions and the approach to engage study participants; chooses the sample and has basic beliefs, interests, and ideas about the subject under study.

From a social constructivist viewpoint, the role of a researcher is to articulate and explore common forms of understanding of the phenomenon in relation to the current,

past, and the likelihood of the future (Gergen, 1985). My role as a researcher was to

explore business strategies used by metal manufacturing leaders to reduce workplace

injuries. Lee (2012) noted that the role of a researcher is to conduct research in a way that

facilitates participants to define and construe personal reality. From the analysis of

interview data, my aim in this study was to generate themes and ascribe meanings to what

emerged from the participants' insights and responses.

 To further define my role as a researcher I have included supporting research

which helped me to conduct my research.  Ashton (2014) argued that the role of the

researcher entails listening, observing, taking notes, and recording the interview without

becoming too involved in the discussion. In discussing this topic, Ashton noted that a

researcher must understand when to pause the interview, allow it to flow, and how to

remain calm notwithstanding the tensions of the interview. Ashton also noted that a

researcher should constantly read the body language, tone, and facial expressions of the

participant to check if they are comfortable enough to continue the interview and

terminate the interview at the slightest hint of discomfort. Finlay (2014) suggested that a

researcher should share journal notes and interview recordings with participants to enable

them to validate interpretations and to confirm if the researcher's interpretations and

meanings formulated truly reflect the participants' personal viewpoints.

 I purposely aligned my research with past researchers in an effort to provide the

reader with a clear viewpoint of my role in conducting my research. Goble, Austin,

Lasen, Kreitzer, and Brintnell (2012) reasoned that researchers conducting semistructured

interviews must plan the research to take into account the moral complexities of research

relationships and be sensitive to the needs of the participants from the start of the

interview to the report writing stage. For this reason, I balanced my study between

empathy and neutrality. As a new or seasoned researcher, the overall goal is to establish

an easy-to-use entry point to literature that supports reliability, validity, and efficiency

(Sturm, Schneider, & Sunyaev, 2015). Goble et al. stated that the role of the researcher in

a case study is to facilitate the understanding of readers of the phenomenon studied akin

to personal involvement and experience.

## Participants

The participants for this study were three managers from a metal manufacturing

organization located in the southeastern United States. Bahn (2013) argued that managers

and supervisors had a direct influence on workplace safety; hence, their involvement in

this study advanced knowledge on the topic and helped answer the research question.

Before commencing the research and recruiting the participants, I was required to seek

permission to conduct the study from the organization. I sought and obtained permission

from Company X (a pseudonym) to start recruitment for my study and used their public

directory to find the contact information of three managers that were willing to volunteer

to be interviewed. Lee (2012) suggested that a researcher should provide the organization

with a letter of introduction explaining the purpose of the research, why the organization

was selected to participate in the study, and how the organization would benefit by

participating in the study. Upon obtaining corporate authorization to conduct the study, I

approached individual participants by means of e-mail with a letter of introduction and a

consent form to obtain their permission to participate in the study on a voluntary basis.

I made telephone contact with the selected individuals to explain the study and how other organizations could possibly benefit from the knowledge arising from this study. The managers who expressed a willingness to participate in the study received a written introduction from me explaining the study together with a voluntary consent agreement to review and sign to participate in the study. The recruitment strategy entailed scheduling individual appointments taking into consideration the convenience of the participants' time, location, and preference for conducting the interviews (Leedy & Ormrod, 2014).

According to Malterud, Siersma, and Guassora (2016), sample size must be ascertained through the concept of saturation. The information power concept served to guide the sample size for this study. Malterud et al. observed that the information power indicated that the more information relevant to the study that the sample holds, the lower number of participants needed for the study. Obtaining a sample size with sufficient information power depends on (a) the aim of the study, (b) sample specificity, (c) use of established theory, (d) quality of dialogue, and (e) analysis strategy (Malterud et al., 2016). My selection of managers for the interviews was based on the belief of their personally-practiced workplace safety leadership and that they would possess insights to share about how to improve workplace safety, as suggested by researchers to provide needed inclusionary and exclusionary criteria to meet the objectives of a study (Bahn, 2013).

My criteria for selecting participants was based on the practitioner experience (see Finlay, 2014), which in this study entailed the requisite workplace safety leadership

experience. Sutherland et al. (2014) noted that researchers using interpretive phenomenological analysis engage in purposeful sampling and analyze data obtained from a homogeneity of the sample, which enhances the transferability of research findings. The goal of conducting this study was to gain insight into successful strategies for reducing workplace injuries. The research involved interviewing three managers with a proven track record in reducing workplace injuries to validate the study, consistent with the research of Finlay (2014) and Sutherland et al.

## Research Method and Design

One of the fundamental characteristics of scientific research is transparency (Ketokivi & Choi, 2014). To evaluate the merits of an argument, an individual must have access both to the logic that generates the conclusion and the premises that support it. Yin (2017) recommended that researchers use a qualitative case study to gain insight into participant experiences regarding an event of interest. Quantitative research and numerical data are used to answer questions of *who, where, how many,* and *how much* in examining the relationship between specific variables (Frels & Onwuegbuzie, 2013). I sought to explore the daily experiences of participants in this qualitative single case study. My choice to use the qualitative research method and the single case study design instead of quantitative and mixed methods was determined by the need to answer the research question of what strategies do manufacturing business managers use to reduce workplace injuries.

**Research Method**

The research method for this study was qualitative, and my intent was to explore the business strategies used by manufacturing business managers to reduce workplace injuries. A case study consists of an in-depth inquiry into a specific and complex event, set within its real-world context (Yin, 2013). The goal of this research study was to gain an in-depth knowledge of the lived experiences of participants in reducing workplace injuries.

Qualitative research is a humanistic and person-centered approach to understanding the thoughts of a person or an event under investigation (Berger, 2015). A qualitative researcher explores the lived experiences of the participants being considered (Cibangu, 2013). Qualitative research can systematically uncover compelling insights into personal perspectives and attitudes that shape decisions and behaviors, which participants may not readily express in the clinical setting (Tong & Dew, 2016). Berger (2015) suggested that a qualitative research method is most suitable for exploring lived experiences.

A quantitative research method is appropriate for interpreting and explaining relationships between variables and testing hypotheses (Venkatesh, Brown, & Bala, 2013; Yang, 2013), which was not the aim of this study. A quantitative method would not have fit the purpose of this study because my goal was not to evaluate variables or test hypotheses. Mixed-method integrates both qualitative and quantitative data (Alavi, Archibald, McMaster, Lopez, & Cleary, 2018) and I rejected it as an approach because it is long, complex, and the numerical data component holds little value in understanding

human dynamics. A mixed method approach did not meet the purpose of this study, which was to gain deep insights into the strategies and practices of managers in reducing and preventing workplace injuries. This purpose did not require any numerical and quantitative data collection.

**Research Design**

Shaban, Considine, Fry, and Curtis (2018) noted that case study research is appropriate when exploring new or emerging problems where limited evidence is available. Qualitative case study research enables the researcher to gather the required data to answer the initial research question as clearly as possible in a natural setting (Houghton, Murphy, Shaw, & Casey, 2015). Ling, Payne, Connaire, and McCarron (2016) reported that researchers using the multiple, longitudinal, qualitative case study design, can explore the respite needs and experiences of participants. In this study, a single case study design allowed me to explore the views and strategies used by manufacturing business managers to reduce workplace injuries in depth.

Several designs are used in qualitative research (Bahn & Weatherill, 2013), including phenomenology, ethnography, narrative, and case study (Merriam & Tisdell, 2015). Moll (2013) described a case study as a standard research design conducive to the in-depth exploration of data in the context of business practices. In this study, my goal was to interview participants to explore, describe, and explain the business problem in a real-life context. My rationale for choosing a case study design was because of the short amount of time it would take to conduct and the low cost, which is an ideal and optimal

way to explore business strategies that could reduce workplace injuries in the manufacturing industry.

In ethnography, the researcher focuses on interviewing participants in the specific culture of a group of people (Verner & Abdullah, 2012). Researchers use an ethnographic design to describe, investigate, and understand groups with a common culture (Cunliffe & Karunanayake, 2013). An ethnographic design is useful when researchers want to understand the participants' beliefs, values, and sociolinguistic approaches focused on communicative behavior talk and text within the participants' unique environment (Marshall & Rossman, 2016). An ethnographic approach did not meet the purpose of this study because I had no intention to explore a culture.

A phenomenological design requires researchers to interview participants about their personal real-life experiences (Bevan, 2014). A phenomenological design does not include the use of secondary documentation to implement methodological triangulation (Yin, 2017). Because the phenomenological design focuses on participants' lived experiences, albeit without external triangulation of data sources, I did not choose to use it for this study.

Researchers use a narrative design to identify the chronologically-expressed life stories and experiences of individuals (Yin, 2017). A narrative design was not appropriate for this study because my aim was not to seek participants to tell personal life stories associated with workplace injuries in the metal manufacturing businesses.

**Population and Sampling**

The population for this study was comprised of three managers from a metal manufacturing company in east Tennessee. Acharya, Prakash, Saxena, and Nigam (2013) argued that the best strategy for conducting a research study is to investigate the entire population. The problem with investigating the entire population is the potential time and costs involved. The alternative to investigating the entire population is to study a sample large enough to represent the entire population (Acharya et al., 2013). Acharya et al. noted that a sample is a subset of the entire population, selected to be a representation of the larger population. Three managers out of 10 volunteered to serve as a representation of the larger population in my purposeful research sample because management implements safety strategies and programs. The east Tennessee facilities were the research location for the study because the location is about a 40-minute drive time making feasible the scheduling of face-to-face, semistructured interviews with participants.

The population for the sample depends on three factors: (a) sampling methodology, (b) size, and (c) response rate. Choosing a probability sample method for determining sample size is appropriate given the aims of the study. The probability sampling technique was appropriate for the case study because the study involved interviewing only managers who have implemented strategies to reduce workplace injuries. Finlay (2014) noted the criteria for selecting participants should be based on the participant's practitioner experience, which was the focus and aim of this study in screening, qualifying, and selecting only qualified managers.

The final number of participants was reached when all available data was collected and no additional themes or data was collected from interviews, leading to data saturation (Leedy & Ormrod, 2014). According to Marshall, Cardon, Poddar, and Fontenot (2013) purposeful sample, is the most common sampling technique. A researcher actively selects the most productive sample to answer the research question. I chose to use the purposeful sampling strategy involving three participants from Company X to answer my research question on strategies to reduce workplace injuries because of time and cost are minimal to complete my study. In support of comprehensive primary data collection, Goble et al. (2012) recommended that a researcher should continue adding new participants to the sample during the span of the study to achieve data saturation. For my study data saturation occurred when no new themes emerged from the participants interviewed.

## Ethical Research

When it comes to ethical research Campbell (2016) noted that ethics are important to research and practice, meaning that the process of researchers' work is as much a defining feature as the content-oriented pursuits. In aligning with Walden's Institutional Review Board (IRB) requirements, the measures to conduct an ethical study included seeking permission to conduct the study from the organizations before recruiting the research participants. Soliciting volunteers to participate in the study entailed applying the requisite inclusionary criteria of seeking managers who had been involved in successfully preventing and reducing injuries in the workplace. Each manager was emailed detailed information on the study and the potential benefits that may accrue at

the personal and organizational level. Campbell (2016) emphasized that research should be based on ethical principles for professional conduct, for example, The Belmont Report includes five Ethical Principles of Beneficence and No maleficence, Fidelity, and Responsibility, Integrity, Justice, and Respect for People's Rights and Dignity, which was adhered to in this study.

To assure the study was conducted ethically, each participant received a consent form along with information denoting that participation is voluntary, and indicating that withdrawal at any time and stage, was possible without ascribing any reason, or facing any adverse implication or consequence. Fusch and Ness (2015) stated that during the informed consent process, scholars must ensure prospective participants have the opportunity to ask questions and sign a voluntary agreement to participate, which was followed in this study. During the informed consent process, I informed all of the participants that participation is strictly voluntary, and there will be no form of payment or incentive associated with their participation in this study.

In accordance with the National Institutes of Health (NIH), all participants must be protected in every phase of the research, which I adhere to in this study, with the institution of appropriate measures, safeguards, and protocol in accordance with my training. Each participant's interview was conducted using Walden interview protocol (see Appendix A) in a private location and saved before next the interview begins. I made sure that all interview data and documents were in my possession and stored in a secure location under my control. Wall and Pentz (2015) noted that researchers should make every possible effort to mitigate any potential harm to participants by ensuring

confidentiality, obtaining informed consent, and protecting the participants' rights to privacy.

## Data Collection Instruments

In qualitative research, the researcher is the primary instrument for data collection (Yin, 2017). According to Denzin (2013), the interview questions and the researcher are the instruments for a study and will be no different in the data collection for this study. Marshall and Rossman (2016) noted that using different information sources contributes to a detailed understanding of the issue being explored. I was the primary data collection instrument for this study.

In this section, the details included the rationale and basis for selecting the data collection instruments. Wahyuni (2012) noted that for multiple case studies, researchers should use two types of primary data. I used participant interviews and relevant organization documents provided by the participants for triangulation. Rowley (2012) stressed that there are three common types of interviews in qualitative research (a) structured, (b) unstructured, and (c) semistructured interviews. The semistructured interview included open-ended questions categorized by the degree of structure permitted during the interview. Rowley noted that structured interviews include a greater number of questions that require relatively short responses as compared to unstructured interviews. Yin (2017) noted that unstructured interviews have fewer questions than structured interviews and resemble a conversation rather than a structured line of inquiry to collect in-depth information on the topic of research. Wahyuni noted that the primary data is often collected using semistructured interviews with the experts in the observed topic

from the case organizations. In this study, I used semistructured interviews, and document reviews.

Yin (2017) suggested guided dialogue rather than organized queries; the line of questioning in multiple case study interviews is likely to be fluid rather than unyielding. A face-to-face semistructured interview process was used for collecting data from managers to gain insight into the research query, through interview questions (Anyan, 2013). Leading case study design research exponents such as Yin have suggested, that the researcher is directly involved with the collection of data from interviews and other sources of evidence in case study research. Researchers function as an active instrument in the process of information collection during qualitative interviews (Bryman & Bell, 2015). The interview process establishes a connection between interviewer and participant and motivates the interviewee to provide detailed answers (Yin, 2017). Anyan (2013) noted that it was important not to pressure or coerce the participant towards specific responses during the interview. To avoid placing any pressure on my participants I informed each participant that they were free to answer my question according to how they wanted to answer and that there was no wrong answer. I also thanked each participant for taking time out of their busy schedule to volunteer to participate in my study.

A qualitative researcher plays a more complex role in research because a personal interaction with participants is required, compared to the quantitative researcher (Graebner, Martin, & Roundy, 2012). To confirm, Karlsson, Friberg, Wallengren, and Öhlén (2014) noted that researchers were the main instrument in a study conducted and

presented an analysis of how to create fieldwork observations to document a patient's end of life care experience. Graebner et al. (2012) noted that a researcher should specify the reason for using qualitative data collection methods to help set the reader's expectations regarding how the researcher will introduce and justify the study. As part of the initial contact with each participant, I provided an e-mail with information on how and why I was conducting this study, and what to expect if the participant should choose to volunteer their participation.

The plan for this study included using an interview protocol (see Appendix A), known as Interview Guide (IG), and an audio recorder (Olympus VN-541PC) to capture the participant's conversation and responses to the semistructured interview questions. Ayan (2013) noted that the individual semistructured interview method offered a flexible medium of communicating freely about the topics of interest and the participants and the researcher. By formatting a face-to-face interview, participants were encouraged to speak candidly. I used semistructured face-to-face interviews guided by open-ended questions to answer the research question. Stake (2013), Wahyuni (2012), and Yin (2017) noted that researchers in a semistructured interview, using a list of predetermined questions from the interview protocol facilitated candid and emotional answers form each participant.

Each interview required approximately 10 to 15 minutes and took place at a local restaurant convenient to the participant's home over dinner. The data collection instruments consisted of an audio recorder (Olympus VN-541PC), laptop (ASUS), journal, and a writing implement. Taking notes with the journal and pen during the

interviews helped me to annotate and describe the manager's body language as the interview progressed. The journal notes consisted of participants facial expressions and body position (relaxed, tense, or signs of being anxious) observed during the interview.

These instruments help to ensure the reliability of transcriptions by seeking the confirmation of the interviewees. The instrument included an introductory statement assuring the confidentiality and reiterating the purpose of the study. The interview questions include topics relevant to the research question for this study. The main feature of an interview was to enable the managers to share their personal perspectives, stories, and experience regarding a particular social phenomenon, under study by the researcher (Wahyuni, 2012). For this study, the collection of data involved using semistructured interviews with managers and reviewing organizational documents of a metal manufacturing organization.

Qualitative researchers recommend conducting a review of the interview questions as a strategy to enhance the quality of the questions and ensure clarity for participants as well as to elicit the relevant information for the study (Jacob & Ferguson, 2012; Rowley, 2012). A step to enhance the credibility and transferability of the data collection instrument included member checking. The purpose of a review of the interview guide, protocol, and questions is to enhance and refine the research instrument (Jacob & Ferguson, 2012; Rowley, 2012).

Marshall and Rossman (2016) recommended the measure to enhance the credibility and transferability of the data collection instrument, included semistructured interviews, review of relevant documents, and follow-up interviews for member

checking. Hovmand et al. (2012) suggested that member checking is one strategy for the researcher to organize information into clear and manageable sections that are consistent with each participant. Member checking consisted of providing each participant with a summary and interpretation of the interview to provide an opportunity to validate the accuracy and completeness of the researcher's interpretation of the participant's responses, and also the ability to edit and amend any content, or view expressed (Smith & McGannon, 2018). Member checking is done as part of a follow-up during the study to confirm data captured (Yin, 2017). Participants had the opportunity to ask questions during the study.

## Data Collection Technique

I collected data using semistructured interviews and document analysis. My initial contact with the three managers of Company X was made by phone (see Appendix A). Finlay (2014) noted that using interviews has an advantage of serving to gain insight into memories and the emotions of the participants. The advantage of the semistructured interview is a researcher has the opportunity to establish rapport with participants. The initial contact with each manager was by phone to help establish a relationship, and then all other communication was by e-mail because this was the preference of the managers. Finlay stressed, that interviews are friendlier compared to most other data collection techniques because in interviews one engages in mutually beneficial dialogue. Interviews were scheduled at each managers' convenience at a local restaurant after dinner near their home. At the agreed, upon location and time, I began the interview by introducing myself using the Walden interview protocol (see Appendix). Wahyuni (2012) noted that

researchers must obtain permission from each participant before interviews are audio

recorded. Pursuant to the National Institutes of Health (NIH) and the Walden University

IRB requirements written permission was obtained prior to scheduling participants'

interviews. After a brief opening convocation with each participant to establish a rapport,

I began the interview. Shaik (2012) noted the advantage of recording the interview was

that it enabled me to playback and listen repeatedly to enhance my understanding and to

facilitate data transcription and analysis. Lee (2012) suggested, that researchers should

keep a journal of each interview for notes and comments in addition to the audio-

recorded evidence. I noted in my journal what type of facial expression and body

language that was displayed by the participant during and after the interview to provide

me with a reference during the transcription and analysis phase of my study. The

semistructured interview protocol (see Appendix A) served as a guide but each manager

was allowed to express personal viewpoints freely (Shaik, 2012). Likewise, collecting

documentary evidence helped to support interview explanations. I obtained support

documents from each manager and Company X's public web page. Documents such as

Pre Job Briefing and Post Job Briefing documents helped augment the evidence collected

through interviews. I e-mailed each participant a copy of my analysis of the interview for

their review as part of member checking and cross-case validation used concurrently with

the data collection process entailed seeking clarification of viewpoints from different

participants within the same organization and also from different departments to establish

the true-value of evidence (Leedy & Ormrod, 2014). Leedy and Ormrod (2014) noted

that using multiple data sources in a qualitative case study enhances the research reliability and validity.

## Data Organization Technique

Mitchell and Wellings (2013) stressed that researchers must safeguard the identity and information associated with participants and companies, by coding the information and also storing it in a safe location. I used coding to safeguard participants and organizations' information collected during the study. Labeling interviewees Participant (1, 2, & 3) and the business Company X, ensure the confidentiality of all involved in the research. I stored all documents and data collected during this study in a locked file cabinet, that only I have access. Yin (2015) suggested that shredding documents is a reliable way to destroy research related documents and media. I will perform the suggested final step of completing this study by shredding and incineration of text data and the programmed deletion of computer files 5 years from the publishing of this study as part of the data and confidentiality protection measures and plans.

## Data Analysis

Tracey and Unger (2012) noted that qualitative data analysis techniques involve editing, cross-member checking, cross-case validation, classification, coding, and interpretation, which are consistent with the views of many researchers. Leedy and Ormrod (2014) noted editing and cross member validation in a study will involve examining the collected raw data to detect errors and omissions and to correct the errors where possible, by returning to the participants for clarification. Classification typically involves arranging data in groups based on common characteristics, themes, or meaning

(Lee, 2012), a process that was adopted in this study. Coding involves assigning numerals, color codes, or symbols to responses so that these can be placed into a limited number of categories or classes (Finlay, 2014). Finally, interpretation involved drawing meaning from the categorized data and verifying the interpretation with participants help to ensure accurate interpretation of the data (Leedy & Ormrod, 2014). I noted emerging themes in the margins of the transcripts. I analyzed the transcripts one-by-one and line-by-line to achieve completeness of analysis by ensuring no evidence was omitted.

The thematic analysis enables a researcher to search for groups of words as these relate to a specific meaning or concept and this approach helps to overcome the main shortcoming of content analysis, in which the meaning of a particular concept or word can be expressed in a number of different ways or words (Silverman, 2011). The thematic analysis can enable a researcher to check all the content for related themes and help organize the data in terms of recurring themes, and then draw meaning from that analysis (Leedy & Ormrod, 2014), which was adopted in this study. Once all transcripts were analyzed, themes were collated, sorted, and in some cases, merged to give a holistic analysis of the data. When using the holistic technique, a leader examines all areas of an issue to develop a solution. I examined all data collected to support my study for using transformational leadership framework. QSR International (2016) recommended researchers use research software like the NVivo 11 Pro to help perform various qualitative data analytics such as thematic analyses and word cloud among other analytic possibilities. After discussing possible data analysis software with fellow classmates and viewing YouTube videos NVivo 11 Pro was my software choice.

According to Finlay (2014), the themes emerging from the data and in some cases, the names ascribed by the participants to certain processes or events should be used to categorize the data. In the body of the transcripts, color coding and lettering were used to identify recurring themes and key concepts. The mental process that influences the selection of the codes was based on the need to answer the research question. Themes aligned with improving workplace safety from the research are processes, actions are taken, reactions, interactions, collaborations, interventions, lessons learned, and culture development. Leedy and Ormrod (2014) noted themes should be modified by what the participants said as recorded in the interview transcripts. The themes and meanings from the data synthesis were clustered into groups of commonality. During this stage, initial codes were modified or expanded upon where necessary. Leedy and Ormrod noted that the themes and meanings derived from the preliminary interpretation and cross-member checking and cross-case validation should be used to undertake a holistic interpretation of the data. Sutherland et al. (2014) noted that data analysis can stretch from holistic analysis of the entire case to an embedded analysis of a specific aspect of one case or the entire case or just focus on limited key issues or analysis of themes within a case or across cases also known as cross-case analysis. For my study, I focused on the three themes: communication, training, and tools and equipment from the participants. Lee (2012) noted that data analysis and interpretation process should follow a participatory process involving both the researcher and participants, which was the case in this research study. Finlay stressed that participatory analysis and interpretation are an interactive form of feedback and reflection that moved back and forth between the

understanding of the researcher and the reality of participants. By alternating between personal understanding and the participant's reality, by asking clarifying questions it was possible to align with an established procedure for qualitative analysis and interpretation. When using an explanatory lens, researchers should use a filter to accept richly detailed evidence, which was not adequately described with the goal to achieve rich descriptions, detailed meanings, and useful processes (Tracey & Unger, 2012). As part of my study to explore how to reduce workplace injuries, I developed open-ended questions to solicit a rich and detailed response from each participant. The questions were designed in a way to cause each participant to draw on their past experiences which provided a unique and emotional response. It is the participants' unique and emotional responses which allowed me to achieve my goal of developing a detailed analysis of how to reduce workplace injuries.

## Reliability and Validity

In qualitative research, validity, or trustworthiness and reliability are often discussed in terms of the credibility, transferability, dependability, and confirmability of the research. The reliability and credibility of the research is a reflection of the rigor with which the study was conducted (Seale, 1999; Wahyuni, 2012). Brakoulias et al. (2018) argued that the objective of the research is to develop, validate, and assess the reliability of the study. Leedy and Ormrod (2014) noted that academic rigor in research must be clearly articulated in a step-by-step approach for the benefit of the readers and other researchers. By clearly explaining to the reader the research design and research methods,

a researcher can help interested researchers to review the research process to evaluate if the same results can be found by copying the study (Silverman, 2011).

**Reliability**

The truth-value of a study can be measured by assessing the completeness of data collection methods, data sources, and data interpretation (Lee, 2012; Seale, 1999). Stake (2013) noted that reliability of the study can be reached when researchers provide the reader detailed step-by-step information on the research methods so that other interested researchers and readers could follow the same steps and arrive at the same conclusions. In aligning with past researchers I provided detailed information on how I conducted my research, to include the location of the interview, type of recording instrument, software programs, type of laptop, and storage and security measures used to complete this study. As part of this study, I provided information on past research on confirmability, dependability, validity, and creditability as the foundation of my study.

**Confirmability.** According to Lincoln and Guba (1982), researchers must provide a detailed description and justification of both the research methods and research sample that were used. Cypress (2017) noted that researchers need to maintain a reflexive journal during the research process for notes and documentation. (Cypress, 2017; Lincoln & Guba, 1982) stressed the need for researchers to maintain an audit trail of the research process. By maintaining a journal of the interview process, I was able to capture decisions made in the field of exploration associated with the experiences, decisions, and choices made (Cypress, 2017). Leedy and Ormrod (2014) noted confirmability ensures

the data collected will adequately answer the research question and support the research findings.

      **Dependability.** According to Funder et al. (2014), the foundation for dependability of a study lies within the descriptions and justifications of sample choice and sample size. Furthermore, researchers will need to discuss and present the effect size and statistical significance of the research findings (Funder et al., 2014). Cypress (2017) noted dependability is member checking or peer review to validate themes and descriptors identified during the interview process. Sutherland et al. (2014) noted that the dependability of a study is validated through triangulation of data by contrasting evidence from documents review with evidence from interviews, and member checking. I used the pre and post job briefing documents that were provided by each participant note, the documents were basically the same other than department name and location as well as their review and feedback to validate my analysis and findings.

## Validity

      Chung and Lin (2016) found that in order for the qualitative researcher to address concerns of the truthfulness of a study is determined by how appropriate inference can be legitimately made from the defining the measurement of a phenomenon. The questions comprising the semistructured interview protocol allowed me to take full advantage of the chances to identify the full range of the phenomenon under study (Sutherland et al., 2014). Silverman (2011) noted researchers need to evaluate the extent to which the semistructured interview questions generate the level of detail needed for answering the central research question of what strategies metal manufacturing business managers use

to reduce workplace injuries. From the participants' detailed and emotional responses, I was able to gain a new insight into leadership strategies that could help other organizations to reduce workplace injuries. By using a recording device, journal, laptop, computer software, data transcription, and member checking I was able to achieve transferability, creditability, and saturation for my study.

**Transferability.** According to Cypress (2017), researchers achieve transferability by using purposive sampling method, which provides a concentrated description through a detailed and accurate description of the participants' experiences. Cypress noted that researchers should take special care with the collection, identification, and analysis of all data associated with the study. During the analysis of audiotaped interviews, every attempt was made to document step-by-step all stages of the analysis. According to Cypress qualitative research analysis refers to categorization and ordering of information in a way that will make sense of the data and will allow the researcher to write an accurate report. Finfgeld-Connett (2010) noted that a rich description of processes and the step-by-step explanation of the research methods for the purpose of possible replication by other researchers define transferability.

**Creditability.** According to Cypress (2017), creditability is achieved through the accurate and truthful depiction of a participant's experiences through engagement and observation to learn the context of the phenomenon and minimize distortions of the data collected. Leedy and Ormrod (2014) noted researchers should use methodological triangulation to contrast review of documents being studied with interview data to ensure accuracy. Silverman (2012) noted that methodological triangulation is beneficial in

assuring the reader that the results are supported by the data. I performed methodological

triangulation to ensure the truth-value of the evidence provided by the managers during

the interviews. Leedy and Ormrod noted the creditability of a study is established when

there is a demonstration of how the research was conducted, and that the evidence

supports the findings. Quick and Hall (2015) noted that researchers using triangulation of

data is an effective qualitative validation technique to validate codes or themes collected

from many sources or individuals. Researchers should establish a buffer for themselves to

isolate the researcher's biases so as not to interfere with the research evidence when

formulating the findings (Finlay, 2014).

**Saturation.** Fusch and Ness (2015) noted that interviews asking open-ended

probing questions of multiple participants can achieve saturation. As suggested by

researchers, participants should be added to the study until no new significant data

emerges, at which time the case study saturation will be reached (Tracey & Unger, 2012),

which was followed in this study. After receiving IRB Approval 03-06-18-0602348, I

commenced my research by interviewing three participants, collecting supporting

documentation, performing data analysis, transcription, and member checking to achieve

data saturation for this study.

<div align="center">

**Transition and Summary**

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Section 2 represented a description that included specifics of my plans to portray

the readiness and preparations for data collection and analysis. Outlining the role of the

researcher served to clarify ethical and other norms and imperatives in undertaking a

rigorous and ethical study. The research instrument in the form of the protocol and

interview guide, with a semistructured interview schedule, were used for the study. I explained the data collection tools and data collection methods, and the selection of the research sample. Data collection commenced after obtaining The IRB Approval. The data collection process consisting of the data collection instruments, technique, organization, was followed by data analysis, interpretation, and storage of raw data. In summary, this section presented the suitability and fit of a qualitative research approach, with a single case study research design to fulfill the research objectives. A case study using semistructured interviews and documents analysis was conducted at a metal manufacturing business in east Tennessee. Three managers were interviewed to gain insight into the strategies used to reduce workplace injuries. Section 3 will include details on the data collected, thematic analysis and the important recommendations formulated from the findings of the study. Section 3 will also include recommendations for future research, the plans for the dissemination and publication of the study findings, a conclusion, and personal reflections based on the experience of the doctoral journey.

Section 3: Application to Professional Practice and Implications for Change

## Introduction

My intent with this qualitative single case study was to explore the strategies used by three manufacturing business managers to reduce workplace injuries. The participating managers demonstrated their knowledge of improving workplace safety to reduce injuries and displayed a clear understanding of the importance of motivating employees' involvement in their own safety. The participating managers also confirmed that a transformational leader can positively influence their organization in the area of reducing workplace injuries which was consistent with many of the research findings from my review of the professional literature. All participants agreed that any successful safety program must be implemented from the bottom up in order to be totally accepted by all employees.

## Presentation of the Findings

The central research question that guided this study was: What strategies do manufacturing business managers use to reduce workplace injuries? In response to an interview question addressing what workplace injuries happened most in their department, the three managers identified sprains/strains as a most reported injury that affected their department. The following three themes emerged from the three participant interviews and my review of organizational documents: (a) communication, (b) training, and (c) access to equipment/tools. As part of presenting my findings, I will discuss each main theme and how the themes aligned with the literature reviewed in this study.

My objective with this qualitative single case study was to explore the strategies used by manufacturing business managers to reduce workplace injuries. The extant literature aligned with my use of the conceptual framework of transformational leadership theory (see Burns, 1978). The underlying tenets proposed by Kouzes and Posner (2012) included (a) inspiring a shared vision, (b) challenging the process, (c) enabling others to act, and (d) encouraging the heart. I coded the participants as SM 1, SM 2, and SM 3 in this study. SM 1 was a former small business owner of 10 years before joining Company X in 2009 and had over 19 years of management experience. SM 2 was a manager of 10 years with Company X and possessed a combined 21 years of company service. SM 3 was a manager with 30 years of experience with Company X. SM 3 started his career right out high school and worked his way up the ranks to become a manager for the last 15 years.

**Theme 1: Communication**

The first theme to emerge was communication. Each manager noted that communication was the key to his or her successful implementation of Company X's safety program. SM 3 showed a high emotional response while talking about the importance of communication and noted that the most important point was to inspire all his first-line supervisors to make promoting safety awareness the most important thing they do each day. SM 1 emphasized the importance of communicating the importance of safety to the workers by his supervisors at least three times each day: before work, after lunch, and at the end of the day before going home. The organizational documents I reviewed also aligned with the definition of ensuring the safety of the workers,

employers, and providing a safe workplace environment (see Singh et al., 2016). A

review of organizational documents, the daily crew brief, and the end of the day crew

brief confirmed the benefits of this type of communication. The daily crew brief and end

of day brief are shown in Tables 1 and 2.

Table 1

*Daily Crew Brief*

# Daily Crew Brief

To be completed at _____ pm each day. Maintain document on file for one month.

| Department Line: | Supervisor: | Date: |
|---|---|---|
| Crew Brief Topics | Check Topic Covered | Comment |
| Are all personnel present | | |
| Safety | | |
| Conduct of Operations: | | |
| Plant Conditions | | |
| Equipment Status | | |
| Employee Team Meeting | | |
| Training | | |
| Required Reading, Lessons Learned, New or Revised Procedures. | | |
| Supervisor Signature: | | |

Table 2

*End of Day Brief*

# End of Day Crew Brief

To be completed at _____ pm each day. Maintain document on file for one month.

| Department Line: | Supervisor: | | Date: |
|---|---|---|---|
| Questions | Yes | NO | Comment |
| Are all personnel present | | | |
| Did workers work safely with no accidents/injuries? | | | |
| Were work orders completed? | | | |
| Status of incomplete work. | | | |
| Daily Feedback | | | |
| Upcoming Training | | | |
| Were there any equipment issues? | | | |
| Were there any facility issues? | | | |
| Supervisor Signature: | | | |

SM 1 and SM 3 used the acronym, T.E.A.M., several times during the interviews as part of communication to help create an improved safety culture. The letter (T) refers to training, which is the second theme that I will discuss in the next subsection. The letter (E) stands for employee engagement, while (A) refers to availability and (M) to meeting. The use of this acronym aligned with the transformational leadership theory tenets of idealized behaviors, intellectual stimulation, inspirational motivation, and individualized consideration (Burns, 1978).

All three managers mentioned different recognition programs as a strategy they used to communicate their individual safety initiatives to reduce workplace injuries by promoting worker engagement. SM 1 used a recognition program called Arrive Safe & Leave Safe, where each employee earned points for their group for working safely. At the end of each injury-free quarter, SM 1 would buy lunch. SM 1 was proud to report buying four lunches over the last 14 months. SM 3's recognition program, Be A Safety Star, rewards workers that go beyond in the area of safety (i.e., making safety suggestions or helping a fellow worker to refocus on safety when observing an unsafe act) by taking the self-initiative to help a coworker complete a task with a $10 gift card. SM 3 was proud to report 1 year with zero injuries and the awarding of 120 gift cards when answering my question about how he measured the success of his safety program. The safety-specific recognition programs created by each manager confirmed that transformational leaders can positively influence an organization's safety climate and worker's safety behaviors (see Smith et al., 2016).

The three managers showed emotion in their eyes while making eye contact with me and changing their body language by leaning forward when discussing the letter (A) in the T.E.A.M. acronym. Each manager noted that being available for both their supervisor and workers was key to the success of their safety programs. Each participant has an open-door policy for their workers to ask questions and voice safety issues in a one-on-one environment if needed. During the interview, SM 3 made a noteworthy statement regarding the lack of management availability during the early period of his 30-year career. SM 3 stated that for him, management's lack of availability created in him an attitude of "This is just a job" regarding the company. Leaders that fail to develop communication skills or relationships with subordinates could have a negative influence on employee behaviors in productivity and safety (Mattson et al., 2015).

One form of communication that three managers talked about is the use of meeting as a forum for communicating safety topics and eliciting feedback from workers and supervisor regarding the safety program. The manager's use of meeting to provide a platform for worker's voices to be heard aligns with individualized consideration (Burns, 1978). In regards to the frequency of meeting, all three participants agreed that meeting with their supervisors once a week helped established their commitment to a successful safety program. SM 2 placed an emphasis on meeting with the whole department twice a month. SM 2 found that holding safety meetings every 2 weeks helped maintain employee commitment for the safety program by providing more opportunities for the workers to interact with management and for management to display support for their safety and well-being. Each manager stressed their commitment to showing supportive

behavior versus unsupportive which was consistent with research on the implementation

of injury prevention programs (Teoh et al., 2016).

**Theme 2: Training**

Regarding the subject of training, both SM 1 and SM 3 displayed emotional body

language while discussing their experiences. SM 3 believed that after communication,

training was key to his successful injury rating. The foundation of all training was

Conduct of Operations. Company X used the Conduct of Operations to establish how all

employees should conduct operation. All managers agreed that their success was rooted

in this code of operation. Each manager associated training with the improvement of their

employees' organizational commitment behaviors to perform activities beyond their

regular task (Chiang & Hsieh, 2012). One such training was the voluntary slip simulator,

which trained employees how to fall. Company X was willing to invest resources and

time for the intellectual stimulation of their workforce on how to reduce one of the most

common workplace injuries: slips, trips, and falls. The workplace is where people in

employment spend most of their waking hours, and the workplace community is one to

which most adults belong (Carmichael et al., 2016).

SM 2 pointed out a training/engagement program, that he tried, Employee Safety

Team (EST). EST consisted of employees, appointed by the workers, who received

special safety training to identify safety issues or concerns from the worker's point of

view. Carmichael et al. (2016) built upon the concepts of Bass and Avolio (1990) and

Burns (1978), stating that the goal of a leader is to ameliorate and elevate their followers'

potential in providing for higher order needs. For this study, my aim was to continue

building upon the same assumption by studying how transformational leaders can cultivate employees' behavior to work safer while maintaining productivity. Company X adopted the EST program within a 3-month period and identified 1,200 safety, equipment, and tool issues over a 3-year period. The actions of the managers affected not only their employees but influenced the organizational culture as well as yielded the desired employee behavior by improving safety awareness.

SM 3 believed the EST played a huge role in reducing injuries in the department because the workers were more willing to talk to a peer regarding safety issues. SM 1 pointed out that the development of EST helped eliminate the challenge as a leader concerning reducing workplace stress associated with learning or performing a new task. Bruk-Lee et al. (2013) identified three types of workplace stressors that affected safety programs implemented to reduce workplace injuries: task, relationship, and nontask. Hasson et al. (2016) noted that manager's transformational leadership behaviors had a positive effect on worker's perceptions of organizational learning.

Ashton (2014) also noted that a researcher should constantly read the body language, tone, and facial expression, which I noted in my journal while interviewing each participant. SM 2 displayed a sense of pride when discussing the organizational LO/TO training program, stating that aside from training workers to operate the equipment, the worker also needed to be able to switch between tasks. During a follow-up clarification question, SM 2 provided an example of when LO/TO training would be used, explaining that the most common use of LO/TO was when a new material order required the worker to change out tools and dies on the machines to make the new

material. SM 2 pointed out how the LO/TO program combined management, the occupational health and safety officer, workers, and subject matter experts on one team to identify task hazards associated with beginning a new task. Each manager noted that training played a major role in their ability to manage time when faced with the challenges to meet production deadlines.

SM 1 showed an emotional facial response when discussing the need to train workers on proper body mechanics needed to perform their task. Sun et al. (2016) concluded that charismatic and transformational leadership behaviors had the highest positive correlations with worker job satisfaction while noncontingent punishment and abusive supervision showed low negative relationships to worker job satisfaction. Hillen, Pfaff et al. (2015) examined other high-hazard industries and determined that leaders trained in transformational behavior would positively influence their employee's work performance. SM 1 noted that back and shoulder strain was the major injuries in the material handling department. SM 1 focused on ergonomic training to increase workers awareness on how to perform their task safely. The strong show of emotion and behaviors by each manager revealed their receptivity to improving the organizational culture by addressing the whole person when implementing a safety program (Kunyk et al., 2016).

**Theme 3: Tools and Equipment**

A consistent theme among interviewed managers includes maintaining equipment and tools. Zentner (2015) analyzed McKinsey's 7-S model approach to change involving the integration of seven factors, categorized into two categories of hard and soft elements.

The hard element category includes strategy, structure, and systems. The soft element category includes skills, style, staff, and shared values. Equipment and tool maintenance plays a vital role in the success of creating a safe work environment that reduces workplace injuries. In keeping with research, Zwetsloot et al. (2017) focused on the assumption that all accidents are preventable and each manager believed that a strong maintenance program was key in reducing workplace injuries.

SM 2 referred back to the EST's involvement in helping identify tools and equipment that needed attention. Srinivasan et al. (2016) reviewed the effects of the Lean Tool 5S on organizational safety climate. The 5S program combines lean principle, sort, set in order, shine, standardize, and sustain with safety to produce a reduction in workplace injuries. For years, housekeeping and organization have been critical causes of workplace injuries. The results from pre and post data collection revealed that 5S improved the safety climate of the workers. It also improved the cycle time, area floor utilization, and inventory held up. As well as improved management's commitment and involvement in improving the safety, climate (Srinivasan et al., 2016).

One strategy SM 2 used was to take action right away on all safety issues and provide feedback to the supervisor and workers on how the issue would be addressed. Brogli (2016) identified five key steps to improving and managing safety. First management must establish a team to evaluate the organizations' safety performance based on three categories: culture, compliance, and capital. There must be rules for conducting business to prevent a reckless type of atmosphere that breeds injuries and even death. The team must next develop and outline the scope of the safety program,

unique to all identified stakeholders. The next step for the team is the establishment of compliance and assessment, by conducting a risk assessment to evaluate hazards for which safety programs need to address. The team must develop a plan of implementation for the safety program. The final step is verification, validation, and follow-up, that the program meets all needs and requirements for success.

SM3 gave credit to the tool/equipment maintenance program for his workers taking ownership of the equipment and tools. Schmitt, et al. (2016) explored the role of work engagement as an effective–motivational mechanism through which transformational leadership may relate to proactive behavior. Each interviewed manager's strategy was comparable to have been trained with the tenets of transformational leadership principles to create a safe and productive work environment for both workers and the organization (Glass et al., 2016). SM 3 noted that the worker's attitude had changed to reflect a more positive and proactive behavior. SM 1 mentioned that when he worked on the floor how important maintaining equipment and tools was for him. SM 1 displayed an emotional link as to why maintaining tools and equipment was so important which was one of his reason for working closely with the machine maintenance group to establish a strong maintenance program. SM 1 stated, "Give me a good piece of equipment and the right tools and I can make anything." When it comes to safety, having the right tools and working equipment is vital to the mindset and focus of workers.

## Applications to Professional Practice

The objective of this study was to explore the strategies used by manufacturing business managers to reduce workplace injuries. I used a qualitative single case study

with semistructured interviews and document analysis through conducting interviews with three managers of a metal manufacturing company in east Tennessee. Using NVivo software, I discovered three themes, which are (a) communication, (b) training, and (c) tools and equipment maintenance

Manufacturing managers should develop their strategies based on the details contained in the three themes for successfully reducing workplace injuries. Based on the transformational leadership theory, leaders should model behaviors consistent with idealized attributes, idealized behaviors, intellectual stimulation, inspirational motivation, and individualized consideration (Burns, 1978). Schmitt et al. (2016) explored the effects of transformational leadership as related to worker proactive behavior using motivational mechanism. Transformational leaders recognized the importance of gaining employee's participation when implementing any safety initiatives (Guo et al., 2016). Transformational leaders aspire to develop their employee's safety participation (i.e., organizational citizenship or stewardship behaviors) to go beyond mere compliance to improve safety within the workplace (Jiang & Probst, 2016).

The finding from this study indicates that most managers used communication and training to successfully implement safety programs to reduce workplace injuries. The interviewed managers possessed most of the traits and behavior of transformational leadership to succeed in reducing workplace injuries. Leaders that lack proper transformational leadership training could create an environment that leads to workplace injuries (Kao et al., 2016). The main challenge facing organizations seeking to improve their safety culture is they lack formal leadership training. Leaders that are trained to use

the dimensions of transformational leadership (i.e., idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation) would find that workers to be more receptive to new safety program implementation (Boies et al., 2015). All organizations no matter how large or small needs transformational leaders that can develop a business strategy designed to successfully reduce workplace injuries and increase the productivity, sustainability, and profitability.

## Implications for Social Change

The transformational leader enhances the perceptions of self-efficacy of followers' abilities to contribute to the mission and goals of their organization as well as influencing followers' behaviors out in the community (Krishnan, 2012). Metal manufacturing business managers and business managers, in general, seeking to implement strategies to reduce workplace injuries can use the knowledge attained from this study. Business managers who adopt the recommendation could develop leaders whose behavior may foster positive social change by developing meaningful relationships with their employees their families as well as members of the community. Organizations that use leadership strategies that will improve organizational performance by building mutual trust, communication, and mental models may gain a positive reputation in the community as a driving force for social change (Weller et al., 2014).

## Recommendations for Action

I researched the successful metal manufacturing business strategies used to reduce workplace injuries. There are several recommendations for the use of transformational leadership style for business managers based on the finding of this study. Business

managers who make communication a priority when selecting and implementing a safety program will have a greater chance of succeeding. Managers trained in transformational leadership tenants can garner worker's engagement and approval when implementing any safety program. Managers who develop their business strategies based on scholarly research should expect some challenges from management and should have a proposal to support their chosen strategy again the key to success is communication. One of the imperatives for any organization should be is to maintain a safe work environment to protect their people, their mission, and their community. These imperatives can be achieved through communication, training, and maintaining or developing a strong equipment/tool maintenance program.

My research indicated that workplace injuries could be reduced by training the workers beyond the basics of doing their tasks. The training should include hazard identification, ergonomic (e.g., general lifting techniques & proper task-specific techniques), and individual physical training to promote worker involvement. Business managers should also consider establishing some form of worker lead safety team. The team would look at workplace hazards (e.g., housekeeping, equipment, tools, & lighting) from a workers' point of view and present their finding to management during a scheduled meeting or if need be immediately for resolution. Managers should act quickly on all safety concerns presented to them. The manager should provide feedback via the supervisor, safety team member, or the workers in general as to the path forward in addressing the safety concern to maintain the workers' involvement.

Each of the interviewed managers discussed with pride the use of incentive and reward programs that contributed to their success in creating a safety culture in which their workers wanted to participate. One such program managers could use is a variation based on the Toyota principles that reward individuals or groups for reporting safety issues. The reward program expanded on research conducted on changing mental model. Heslin and Keating (2017) explored the relationship between derailing and enabling mindset development. The researchers' finding indicated that transformational leaders could positively affect their follower's mental model when promoting safety incentive programs based on individualized consideration. The leader should take care to make sure that the reward program is extraordinary to keep the worker's engagement.

Collaborate with local, state, and federal safety organizations to develop or improve safety programs. The Department of Labor has a website with safety programs that are free for leaders seeking to improve safety (BLS, 2016). Managers should foster partnerships with other local successful managers to share strategies that can be beneficial to the industry.

**Recommendations for Further Research**

I chose a single qualitative case study to identify business strategies that three metal manufacturing business managers successfully used to reduce workplace injuries. The interviewed managers provided strategies that future researchers could study. Researchers that analyze the result of this study may discover additional safety strategies that can be used to reduce workplace injuries. The interviewed managers expressed that participating in this study could add value to future research.  Researchers expanding on

the importance of business strategies used to reduce workplace injuries and the associated cost could provide new insight and recommendations for metal manufacturing organizations and general industry managers on the topic.

Future researchers might add to the findings of this study by performing similar research outside of east Tennessee. Researchers could conduct a quantitative study to examine the statistical, mathematical, or numerical data related to reducing workplace injuries to add to literature for metal manufacturing or the general business industry. Researchers could examine or explore the cost of training, development of employee safety teams, or the effectiveness of preventive maintenance programs.

### Reflections

I chose to study leadership styles used to reduce workplace injuries because medically recordable workplace injuries cost companies and insurance companies an annual average of $37,000 per injury (Center for Disease Control and Prevention, 2015). I recognize the specific business problem that some metal manufacturing business managers lack strategies to reduce workplace injuries. I analyzed the results of my study with no preconceived ideas about the successes or failures of leadership styles. I explored the results of the data to understand the business strategies used to reduce workplace injuries without bias. I wanted to understand the data in a transparent manner and without a preconceived opinion. I conducted my research interviews in the metal manufacturing industry with participants without expectations or bias on how the participants answered the interview questions.

I intend to share the results of this study with small, medium, and large companies who may want to implement the recommendation form this study to reduce workplace injuries and the associated cost. I believe that sharing the results of this study could benefit other industry managers seeking to develop strategies that will help reduce workplace injuries, increase productivity, profitability, and sustainability. As I progress in my career, I will share the findings of my study with fellow managers for their review and consideration in aiding to reduce workplace injuries. I will share the results of my study with friends who own businesses seeking strategies to reduce workplace injuries. I am confident that the results of this study will offer value to other business managers outside the manufacturing industry.

During the early part of my career, I realized that hard work alone would not allow me to achieve my goal to progress into upper management I needed a degree. I obtained a Bachelor of Business in 2013, and later a Master of Business Administration in 2015. My post graduate degree was beneficial in my promotion to middle management within my department. I chose to pursue a Doctor of Business Administration (DBA) at Walden University in 2015 to fulfill my dream of making a difference in the lives of young people like my late grandmother through teaching. During the prospective phase of the doctoral journey, I struggled with clear and concise scholarly writing that slowed my progress. Nevertheless, with the help of my mentor and chair, and encouragement from my family I was able to overcome my struggles to complete my research. I want to express my appreciation to the many Walden University faculty members that encouraged me throughout my academic journey. I want to thank my peers for sharing

their victories, struggles, and words of encouragement that help so much on this journey.
I look back on this doctoral journey with a fatherly pride in having watched his child
grow up and is now preparing to leave home. I will always cherish the relationships that I
have formed during my Walden University experience thanks for all you have done.

In the middle of the doctoral studies, I struggled with the research concepts and
especially the transition from prospective to the proposal and the different approval
requirements. I often would get frustrated to the point of wanting to give up. I enjoyed
conducting my research and then writing section three of my study it allowed me a better
understanding of the research process. As I looked over my completed study, I developed
a feeling of confidence that the doctoral process works. I left this journey encouraged that
I can make a social, academic, and spiritual difference in the lives of my fellow man.

**Conclusion**

Some manufacturing business managers lack strategies to reduce workplace
injuries. According to the BLS 2016 noted in 2015 private industry employers report
approximately 2.9 million nonfatal workplace injuries and illnesses. The costs of
workplace injuries and illnesses translates into a billion dollars a week spent by
businesses on the most disabling injuries (OSHA, 2015). The burden because of
occupational injuries has business leaders recognizing, the need to address the financial
burden and problem associated with occupational injuries (Fagan & Hodgson, 2017). The
type of leadership style used by an organization's managers is key to creating an
environment that could reduce workplace injuries. The findings from this study are
significant for manufacturing business managers seeking strategies to reduce workplace

injuries and the associated cost. A manager seeking to implement a new project must be able to identify the stakeholder's priority like health and safety, staff time, training, and cost associated with new equipment or upgrades to equipment (Antonio et al., 2015). Based on the stakeholder's expectations a manager needed to commit the correct resources to produce a successful project.

The lens of the transformational leadership theory and the constructs served as the foundation for this study. The postulations of the transformational leadership theory serve to offer an explanation of leadership traits and rest on the premise that motivational and inspirational leaders create a sense of urgency and dedication among followers and work toward common goals. For managers, one of the biggest challenges faced when implementing a safety program is worker's acceptance. The results of this study indicated that leaders trained in the constructs of transformational leadership could inspire worker's behaviors in working towards a safe and injury-free workplace. The participants in this study used the principles of transformational leadership to create a work environment of trust, collaboration, and respect with their leadership behaviors. The two types of behavior, which are central to the idea of leadership style, are defined as: (a) task behavior, which denotes the extent to which leaders are likely to organize and define the roles of the members of a group, and (b) relationship behavior, the extent to which leaders are likely to maintain personal relationships with an affiliated or assigned group (Bass & Avolio, 1990). Peng et al. (2016) explored how transformational leadership style of CEOs influenced employee's organizational commitment. A leader's leadership style is an important aspect of the social organization that affects the processes of group

formation, coordination, and decision-making within the human societies

(Amornbunchornvej et al., 2016). The state of a leader's mind plays a significant role in

forming a relationship between employee and manager. Jin et al. (2016) explored the link

between a leaders' emotional state and the effect on employees' organizational

commitment. Leaders who experienced a degree of pleasantness at work were found to

engage in positive transformational leadership behaviors that positively fostered

employees' performance. Like Donovan et al.'s (2016) study, the purpose of this study

was to explore the influence of leadership style in making a difference in reducing

workplace injuries in the metal manufacturing industry. The leadership behaviors

displayed by the participants in this study reveal their unique business understanding in

focusing on the human element to reduce workplace injuries.

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Appendix: Interview Protocol

| What you will do | What you will say script |
|---|---|
| Introduce the interview and set the stage often over a meal or coffee | My name is Joe Sparks and I am conducting research under the supervision of Dr. Pete Anthony towards a Doctor of Business Administration degree at Walden University. I am inviting you to participate in a study entitled "Leadership Styles Manufacturing Business Managers Use to Reduce Workplace Injuries". |
| Watch for non-verbal queues Paraphrase as needed Ask follow-up probing questions to get more in-depth information | 1.      What workplace injuries do you encounter the most in your department? 2.      What strategies do you to use to reduce workplace injuries? 3.      What are important reasons which prompted your choice of the favored strategies? 4.      How did the strategies you have chosen reduce workplace injuries? 5.      What challenges have you experienced with implementing your organizational strategies into the work environment? 6.      How did you overcome your challenges? 7.      What were the results from implementing your strategies? 8.      What methods have you used to empower employees to support workplace strategies? |

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| | 9.       What measures do you have in place to let you know if your strategies are successful in reducing workplace injuries?<br><br>10.      What additional information would you like to add to this interview pertinent to reducing workplace injuries that may not have been covered in the interview questions? |
| Wrap up interview thanking participate | I appreciate the time you have set aside for this interview. Is there anything else that you may think would be helpful for me to know, so that I can fully understand the management efforts to reduce workplace injuries? |
| Schedule follow-up member checking interview | Would it be alright to call you if I have any more questions or to seek clarification on my interpretation of the data? |
| **Follow-up Member Checking Interview** | |
| Introduce follow-up interview and set the stage | I have collected a lot of data from other participants and I need to confirm my understanding and interpretation of the issues discussed with subject matter experts like you. |
| Share a copy of the succinct synthesis for each individual question | I have recorded the following evidence from the research participants and have summarized my understanding from my transcription and I would like to check with you if understanding and interpretation is correct. |

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|---|---|
| Bring in probing questions related to other information that you may have found--note the information must be related so that you are probing and adhering to the IRB approval.<br><br>Walk through each question, read the interpretation and ask:<br><br>Did I miss anything? Or, What would you like to add? | 1. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed<br>2. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed<br>3. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed<br>4. Question and succinct synthesis of the interpretation—perhaps one paragraph or as needed |