


2017

# Fire Officer Leadership Strategies for Cost Management

Leo R. Sedlmeyer  
*Walden University*

Follow this and additional works at: <https://scholarworks.waldenu.edu/dissertations>

 Part of the [Business Administration, Management, and Operations Commons](#), [Management Sciences and Quantitative Methods Commons](#), and the [Public Administration Commons](#)

---

This Dissertation is brought to you for free and open access by the Walden Dissertations and Doctoral Studies Collection at ScholarWorks. It has been accepted for inclusion in Walden Dissertations and Doctoral Studies by an authorized administrator of ScholarWorks. For more information, please contact [ScholarWorks@waldenu.edu](mailto:ScholarWorks@waldenu.edu).

# Walden University

College of Management and Technology

This is to certify that the doctoral study by

Leo R Sedlmeyer

has been found to be complete and satisfactory in all respects,  
and that any and all revisions required by  
the review committee have been made.

## Review Committee

Dr. Rocky Dwyer, Committee Chairperson, Doctor of Business Administration Faculty

Dr. Denise Gandy, Committee Member, Doctor of Business Administration Faculty

Dr. Judith Blando, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer  
Eric Riedel, Ph.D.

Walden University  
2017

Abstract

Fire Officer Leadership Strategies for Cost Management

by

Leo R. Sedlmeyer

MBA, Franklin University, 2005

BS, Franklin University, 2004

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

August 2017

## Abstract

Fire departments in the United States accounted for 31% of municipal budgets with increases of 85% spending between 2015 and 2016. The purpose of this single case study was to explore leadership strategies fire officers used to manage costs associated with hazardous operations. The conceptual framework grounding this study was transformational leadership theory. The participants in this study were 10 fire officers who manage hazardous operations in central Wisconsin. The data collection process included open-ended questions in a semistructured format resulting in transcripts, a review of fire department staffing documents, and personal journal notes. Methodological triangulation was used to compare the collected data and verified through member checking for accuracy. Upon completion of data collection, the data analysis process consisted of transcripts involving coding, grouping key words, and reconstructing data into themes. Four central themes emerged from the study: servant leadership, partnership, accountability, and creative staffing. The fire officers used servant leadership to ensure the provisions of services to internal and external customers. The servant leadership practice created trust and integrity. Creative staffing provided innovative cost management and fiscal responsibility to include partnership. Partnership and accountability worked in every facet of the fire department soliciting input from every level of staff. Fire officers in the study practiced transformational leadership daily in both emergency and nonemergency situations. Social implications include innovative leadership strategies and application that may help fire officers promote positive social change through saving lives of firefighters and the citizens they serve.

Fire Officer Leadership Strategies for Cost Management

by

Leo R. Sedlmeyer

MBA, Franklin University, 2005

BS, Franklin University, 2004

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

August 2017

## Dedication

I want to dedicate my study to the most important women in my life who encouraged me in every stage of my life, my late mother Ellen, and wife Kara. My mother provided encouragement throughout her life with a constant smile, hug, and kiss. My wife Kara's support, patience, and perseverance kept me on track. Without Kara's constant support, I would not have been able to complete this journey.

## Acknowledgments

I want to take this opportunity to thank my family for the support throughout this journey. I want to thank my committee chair, Dr. Rocky Dwyer, for the support and direction he provided throughout my study. I want to thank my second committee member, Dr. Denise Gandy, and my URR, Dr. Judith Blando, for their support. A special thanks to Dr. Freda Turner for her dedication to student success.

## Table of Contents

List of Figures .....	iv
Section 1: Foundation of the Study.....	1
Background of the Problem .....	1
Problem Statement .....	2
Purpose Statement.....	2
Nature of the Study .....	3
Research Question .....	4
Interview Questions .....	4
Conceptual Framework.....	4
Operational Definitions.....	6
Assumptions, Limitations, and Delimitations.....	6
Assumptions.....	7
Limitations .....	7
Delimitations.....	8
Significance of the Study .....	9
Contribution to Business Practice .....	10
Implications for Social Change.....	10
A Review of the Professional and Academic Literature.....	11
Transformational Leadership Theory .....	12
Rival Theories Transformational and Transactional Opponents of the Conceptual Framework.....	13



Fire Officers and Economics of Safety .....	15
Leadership Strategies and Hazardous Operations Cost Management .....	17
Poor Leadership Strategies and Exposure to Risk .....	26
Poor Leadership Strategies and Business Sustainability .....	28
Role Model’s Leadership Strategies .....	29
Leadership Strategy Adaptability .....	31
Leadership Strategy Training .....	35
Leadership Strategies for Planning .....	38
Social Transformation.....	42
Transition .....	44
Section 2: The Project .....	46
Purpose Statement.....	46
Role of the Researcher .....	47
Participants.....	49
Research Method and Design .....	51
Research Method .....	52
Research Design.....	53
Population and Sampling .....	55
Ethical Research.....	57
Data Collection Instruments .....	58
Data Collection Technique .....	61
Data Organization Technique .....	63

Data Analysis .....	64
Reliability and Validity.....	68
Reliability.....	68
Validity .....	68
Transition and Summary.....	71
Section 3: Application to Professional Practice and Implications for Change .....	73
Presentation of the Findings.....	75
Conceptual Framework.....	80
Business Practice .....	82
Applications to Professional Practice .....	84
Implications for Social Change.....	85
Recommendations for Action .....	86
Recommendations for Further Research.....	87
Reflections .....	88
Summary and Study Conclusions .....	88
References.....	90
Appendix A: Interview .....	115
Appendix B: Interview Questions.....	116

List of Figures

Figure 1. Graphical model of transformational leadership theory .....5

## Section 1: Foundation of the Study

Hazardous operations are a primary concern for jurisdictional leaders (Steyn & Niemann, 2014). Fire officers manage hazardous operations daily by minimizing life-threatening situations to the workforce while maximizing benefits to the public (Cohen-Hatton, Butler, & Honey, 2015). Personnel assigned to hazardous operations must focus their attention on the operational aspects, and special management strategies are essential to minimizing the possibility of injury or death (Dillard & Layzell, 2014).

Hazardous operations threaten both workforces, and the sustainability of organizations (Almakenzi, Bramantoro, & Rashideh, 2015). In the United States, fire officers receive extensive, world-renowned training for mitigating emergencies, but they do not have the leadership strategies to manage costs. Traditional fire department leadership strategies do not include the leadership and management skills required to manage business-related functions (Rumsey, 2014).

### **Background of the Problem**

Qualifications to function as a fire department officer requires operational leadership strategies (Mumford, Watts, & Partlow, 2015). Financial and operational issues affect fire department operations and can lead to layoffs and organization closure (Ihlanfeldt & Mayock, 2014). Command staff training requirements do not exist (Dillard & Layzell, 2014). Specific business training could prepare fire officers for operational success.

The operation of a fire department requires the combined abilities of hazardous operations and business operations (Rumsey, 2014). The lack of leadership strategies

may lead to deficiencies in both hazardous and business operations (Chittaro & Buttussi, 2015). Efficient management of the business component of hazardous operations is essential to the performance and survival of the organization (Rumsey, 2014). Further research warranted exploring the leadership strategies for managing hazardous operations costs while reducing injuries, and saving lives.

### **Problem Statement**

Failure of fire department officers to manage costs associated with hazardous operations erodes the ability of fire department staff to perform their mission (Sheu & Pan, 2014). In 2012, municipal governments funded \$42.4 billion for fire protection services (Barnett, Sheckells, Peterson, & Tydings, 2014). Between 2015 and 2016, 19,000 municipal governments reported 31% of their budgets were allocated for fire services with an 85% increase in spending (McFarland & Pagano, 2016). The general business problem that I addressed in this study was revenue lost when fire department officers were unable to manage costs associated with hazardous operations. The specific business problem that I addressed in this study was some fire department officers lack leadership strategies for managing costs associated with hazardous operations.

### **Purpose Statement**

The purpose of the qualitative single case study explored leadership strategies fire officers use to manage costs associated with hazardous operations. The target population included 10 fire officers within a single fire department located in central Wisconsin who were successful managing costs associated with hazardous operations.

The implications for social change include the potential to decrease cost while saving lives to promote community trust of the fire department.

### **Nature of the Study**

The qualitative method was appropriate for the research study because interviews provided information from the participants regarding their experiences and the data analysis revealed common themes. The qualitative method addresses phenomena by collecting data through open-ended questions and analyzing the data to determine findings and conclusions (Yazan, 2015). The quantitative method was not my choice because I sought information regarding successful leadership strategies through interviews of experienced fire officers. The quantitative method also measures relationships and uses statistical data (Bernard, 2013), which was not the case for this study. Mixed methods were not appropriate for the research study either, because my intention in this study was not to use both statistical data and interview data.

The research design most appropriate to implement was the case study. Researchers use the case study design to explore programs, events, or a person in a specific time and place (Yin, 2015). The phenomenological design did not meet the needs for the research study because to answer the research question, participants convey perceptions and experiences of managerial decisions through the collection of data during interviews. In the phenomenological design, the focus consists of the research study participants describing lived experiences rather than explaining the facts (Moustakas, 1994).

The ethnographic design was not appropriate because the research problem did not involve groups of people in their natural environment. Marshall and Rossman (2016) expressed that the ethnographic design focuses on the observations of groups in their natural settings within an extended period. The findings of my research study may provide the fire service with a contextual understanding of managing the cost associated with hazardous operations. A single case study approach enabled the study of business problems and the leadership strategies used by fire officers to manage costs of hazardous operations.

### **Research Question**

The research question was: What leadership strategies do fire officers use to manage costs associated with hazardous operations?

### **Interview Questions**

1. What strategies are you using to manage hazardous operational costs?
2. What method do you find works best to manage hazardous operational costs?
3. What unique leadership strategies are needed to manage costs in safety-related tasks?
4. What strategy best represents your leadership in cost management as a hazardous operations leader?
5. Is there anything else you would like to add that you may not have addressed?

### **Conceptual Framework**

I used transformational leadership (TL) as the theory for the research study because fire fighters follow their officers through emergency and nonemergency

situations. Burns introduced transformational leadership theory (TLT) in 1978 (Cetin & Kinik, 2015). Burns used TLT explaining inspiration of followers by increasing motivation that change perceptions, outcomes, and achieves goals. In Burns's study, identification of important constructs of TLT included key constructs (a) idealized influence, (b) inspirational motivation, (c) individualized consideration, and (d) intellectual stimulation (Caillier, 2014). In my research study, TLT supported the expectation of the TL constructs, measured by semistructured interviews that explored fire officer leadership strategies for managing cost based on theory logic and extent of the literature. Figure 1 illustrates TLT as applied to exploring fire officer leadership strategies for cost management.



*Figure 1.* Graphical model of transformational leadership theory as applied to exploring fire officer leadership strategies for cost management.

Conceptually, leaders may use TLT as a framework to identify business problems, identify solutions, and find relevant strategies (Banks, McCauley, Gardner, & Guler, 2016). In my research study, fire officers who apply TLT define the framework



for strategy identification from the perspective of leading by example. Antonakis and House (2014) conveyed that leading by example is the basis of framework through the application of TLT. TLT dovetails into key tenets of TL that include fire officers acting as role models motivating employees to perform above expectations working collectively to achieve common goals (Schaubroeck, Lam, & Peng, 2016).

### **Operational Definitions**

*Fire department:* A fire department is a service or division of a municipality providing fire, rescue, and emergency medical care mitigating life and death incidents (National Fire Protection Association [NFPA], 2014).

*Fire officer:* A fire officer is a person within a fire department meeting the prescribed requirements of NFPA 1021 who has supervisory duties responsible for leading and managing assigned functions (NFPA, 2014).

*Hazardous operations:* Hazardous operations consist of operations within businesses involving life- threatening tasks performed by employees daily (Saetrevik, 2015).

*Safety performance:* Safety performance refers to the act of performing the established safety procedures while completing the given job without injury (Luo & van den Brand, 2016).

### **Assumptions, Limitations, and Delimitations**

Assumptions, limitations, and delimitations are necessary for the reader to understand the direction of the study (Moustakas, 1994). The assumptions, limitations, and delimitations prepare the reader for the groundwork that identifies the research

approach, limits of the study, and the establishment of the framework of the study (Parry, Mumford, Bower, & Watts, 2014). Researchers use the assumptions, limitations, and delimitations as guidelines for research (Marshall & Rossman, 2016).

### **Assumptions**

Assumptions consist of decisions made by leaders in situations, events, or procedures believed to be true based on leadership strategies until verified or refuted (Fattahi, Mahootchi, Govindan, & Husseini, 2015). I assumed that the exploratory qualitative approach was the most suitable method to ascertain the leadership strategies for managing hazardous operations. Assumptions also included that the case study was appropriate for the research study because of the specific focus and the geographical location. Another assumption I made was that data saturation occurred during the interviews of at least 10 current fire officers within a single company. The last assumption I made was that participants responded in a truthful manner in their responses, provided in-depth responses, and participated without bias.

### **Limitations**

The limitations of the research study involved the participants through semistructured interviews. Limitations exist in qualitative research projects with participant's ability to recall events related to the research study (Yazan, 2015). Limitations consist of restrictions of both participants and the discovery of data (Yazan, 2015). Research studies are not free of total objectivity, preciseness, validity, and general knowledge without some degree of subjectivity (Parry et al., 2014). One

limitation of any study is researchers' subjectivity based on their traditions, experiences, and general knowledge of the topic under study (Marshall & Rossman, 2016).

Gaining the trust of participants is a challenge, especially if researchers and participants are unfamiliar with the process of studying people (Fattahi et al., 2015). Establishing credibility and trust is an important task for researchers. Participants were not reluctant to disclose sensitive information from their organizations for fear of retaliation. To manage this situation, establishing rapport with the participants and providing full disclosure of the process, including privacy, was essential. Subsequently, the interview setting occurred in a relaxed atmosphere, in a quiet room at a neutral location away from the participants' work place.

Interviews occurred in a conference room within the city identified by the fire chief located away from the main flow of business, which enabled the participants to answer questions without interruptions or additional pressure. The research study was conducted within the criteria of at least 10 current fire officers in a single company. The results of the research study may be transferable to other hazardous operations and possibly the municipal sector. Finally, fire officers with at least 5 years of experience in fire services and knowledge of strategic leadership issues did not affect possible biases using control mechanisms.

### **Delimitations**

Delimitations are parameters established by research study personnel within their control to obtain excellent results (Parry et al., 2014). A single fire department and the limitation of hazardous operations narrowed the scope of the research study. The

selected population consisted of fire officers possessing at least 5 years of experience in the fire service who manage hazardous operations. Fire officers with 5 years of experience managing hazardous operations provided invaluable data.

The second delimitation was fire officers within a specific fire department. Narrowing the pool of participants to a single fire department with a specific region in the United States solidified the study by limiting the population to produce commonalities (Parry et al., 2014). The third delimitation was fire officers operating within a single-jurisdiction located at different stations with different hazards. Single case studies allow the researcher to focus on specific set of similar leadership strategy paradigms from different areas within a specific region (Marshall & Rossman, 2016). Fire officers operated within 13 fire stations experiencing similar emergency situations located within city limits.

### **Significance of the Study**

The value of identifying leadership strategies may reduce injuries, save lives, and keep the existing budget intact for the business section of the fire department. My findings might reveal leadership strategies that fire officers can use to enhance performance. Increased performance of fire officers could lead to the success of their organizations. Subpar management expertise and performance levels increase the possibility of personnel reductions affecting the workplace that could lead to the elimination of services (Trussel & Patrick, 2013). The findings indicate leadership strategies needed by fire officers to increase performance, reducing the possibilities of accidents and managing costs associated with hazardous operations. The findings

indicate the leadership strategies fire officers need to successfully perform in both prehazardous and posthazardous operations while managing cost.

### **Contribution to Business Practice**

In a financially distressed business, safety budgets are typically targeted first by city leadership (Ruetzler, Baker, Reynolds, Taylor, & Allen, 2014). The financial wellbeing of an organization is critical to hazardous operations (Reilly, 2013). Cost reductions can be in the form of personnel reductions, facility closures, and pay cuts (Reilly, 2013). My study contributes to the practice of business through effective leadership strategies for managing costs of hazardous operations. Business challenges affect the operational needs of organizations.

Fire officers managing daily operations experience challenging situations that may not be cost effective. Managing hazardous operations from a business perspective enhances service through prudent management by using leadership strategies and meeting the business challenges of the organization (Antonakis & House, 2014). The fire department that I studied proposed an efficiency investment within the current budget to assist in alleviating budget overages. I uncovered effective business practices in hazardous operations by identifying the leadership strategies used by fire officers to manage within budgetary constraints.

### **Implications for Social Change**

The contribution of the research study was to invoke positive social change through the leadership strategies of fire officers to promote reducing injuries, saving lives, managing cost, and community trust. Amending the manner in which fire officers

manage fire departments may be the difference between success and failure the bottom line affecting services. Transformation begins with gaining confidence and respect of the workforce, in which employees (followers) will follow the leader's direction (Birasnav, 2014). Fire officers who transform organizations refine their focus through new ideas and values. Managing cost effective hazardous operations through sound leadership strategies reduced injuries and saved lives (Smith, Eldridge, & DeJoy, 2016). Cost savings in departmental budgets, labor costs, and health care costs provided redirection of funds to critical areas of the organization (Hubrich & Tetlow, 2015). Effective business practices contribute to social change within the organization and their customers.

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

The content of the literature in the research studyMy literature review includes a critical analysis and synthesis of articles, books, journals, and professional web pages published between 2012 and 2017. These sources contain the organization, topics, and literature of the research study. The literature review consists of concepts and theories fire officers used in managing hazardous operations cost management. The concepts and theories contributed to successful fire departments with the possibility of creating positive social change.

The organization of literature is composed of the following sections:  
transformational theory, fire officer and economics of safety, leadership strategies and hazardous operations, leadership strategy adaptability, business strategy training, and social transformation. I conducted my researching through Walden University Library

using the Science Direct, ProQuest, Business Source Complete Premier, and Google Scholar search engines for topics and literature. The key words used were *transformational leadership, transformational leadership in safety, leadership strategies, safety processes, management theories, case studies, and qualitative studies.*

An extensive search of Internet databases allows researchers to produce peer-reviewed articles by using key search words. The system of entering specific search terms in a Boolean search using a date range and peer-reviewed articles obtains the desired articles for the research study. My literature review contains 154 peer-reviewed articles published between 2012 and 2017. The total references for the research study contains 190 references. The compliance rate of peer-reviewed publications was 86%. The results of the specific search entailed 82% of the peer-reviewed articles are less than 5 years from the anticipated completion date. I explored the leadership strategies that fire officers use to manage costs of hazardous operations. The literature review information may contribute to social change by saving lives, reducing injuries, and decreasing fatalities. Improving strategies, fire officers optimized their management performance, which enhanced the awareness of safety reducing the risk for the organization.

### **Transformational Leadership Theory**

Employee behavior affects the success of business and operational needs of organizations. Transformational leaders use leadership strategies that transform employee behaviors and actions (Smith et al., 2016). The goal of the fire officer using TL is not to have control over employees; rather, the goals are to I provide a clear vision

that appeals to their employees and to lead by example (Smith et al., 2016). The simultaneous cooperation of the leader using improved leadership strategies and the worker are necessary to the success of managing operations (Birasnav, 2014; Yucel, McMillan, & Richard, 2014). Employee engagement with transformed behaviors and procedures are critical to promoting proper hazardous operations cost management. My objective was to identify leadership strategies that fire officers use to manage the hazardous operations costs. Leading employees in daily operations contributes to successful operations.

Effective leadership enhances employee trust and increased performance in daily operations. The confirmation of employees following their leaders through emulation, trust, and confidence is evidence of effective TL in the research study (Schaubroeck et al., 2016). Specialized training in leadership strategies for fire officers enhances their ability to manage hazardous operations through sound decision-making (Fleming & Zhu, 2009). The specific business problem addressed in the study through TL illustrated that some fire officers lack strategies for cost management of hazardous operations following emergencies.

### **Rival Theories Transformational and Transactional Opponents of the Conceptual Framework**

Leaders using TL change the workforce from one paradigm of thinking to focusing on the mission and goals of the organization (Cetin & Kinik, 2015). A leader with strong ties to his or her workforce provides inspiration, trust, and respect, which that equate to sharing the same visions for the organization (Smith et al., 2016).



Employees working in hazardous operation jobs are usually a close-knit group that looks up to their leader and identifies through the leader's intellectual stimulation, inspirational motivation, or idealized influence (Cooper, 2015).

The cohesiveness of employees in hazardous operations is natural because the employees rely on each other to remain safe while accomplishing the work tasks (Hogan & Foster, 2013). The simultaneous cooperation of the business leader and the worker are necessary to the success of improving hazardous operations cost management (Marsh, 2013). Cooperation consists of the leader's assessment of the employee's needs and through tailoring leadership strategies to incorporate the employee's job needs (Birasnav, 2014). Clarke (2013) gathered that transforming task accomplishment is difficult in organizations where hazardous operations are the main function. In my study, fire officers worked within proximity of staff and were cognizant of the needs of both the employee and the organization.

The leader guides followers in a path of short-term gratifying goals of achievement through incentives (Reed et al., 2015). Transactional leaders focus on enforcing goals and objectives through a system of rewards and punishment (Iskan, Ersari, & Naktiyok, 2014). Employees who work in a predominantly hazardous environment must follow strict safety processes where the reward is to remain healthy and uninjured (Hajmohammad & Vachon, 2014). Hazardous operations vary in different degrees that required different leadership strategies opposed to transactional leadership that use a one-size-fits-all approach.

In a business environment where the use of transactional leadership exists, employees need motivation and instruction on every task (Antonakis & House, 2014). The transactional leader practices a hands-off approach where the only interaction is enforcing compliance behaviors (McCleskey, 2014; Smith et al., 2016). Hazardous operations require compliance and the employees to perform in a productive manner focusing on the organizational goals. The business leader's frequent interaction in both compliant and noncompliant situations monitors employee actions to ensure compliance (Pilbeam, Davidson, Doherty, & Denyer, 2016). Fire officers worked in proximity with staff to maintain compliance with organizational standards and maintain a positive work relationship. Deichmann and Stam (2015) contended that business leader intervention with employees occurs when a deviation exists in procedures or standards. Clarke (2013) contended that the consistent use of negative leadership strategies interaction and constant oversight has adverse effects on employee morale, causing employee turnover and reducing hazardous operations performance.

### **Fire Officers and Economics of Safety**

Fire officers perform many duties that include managing fire departments as a business. Fleming and Zhu (2009) explained that fire officers must have a working knowledge of personnel management, budgets, and organizational structures in the same manner as private sector business leaders. Fire officers manage fire departments under a unique phenomenon of the uncertainty in everyday operations as opposed to the stable environments of traditional businesses (Sienkiewicz-Malyjurek, 2016). Smith et al. (2016) conveyed that fire officers must possess the strategies to manage costs of

hazardous operations and the business section of the fire department. Subsequently, managing the costs of hazardous operations requires a cognizant effort and skill with budgeting.

Fire officers often perform more with less resources as the same as private sector counterparts. Of the 19,000 reporting municipal governments, public safety resources encompass 40% to 80% of municipal budgets, which increases the likelihood that reductions will affect fire departments in some manner (McFarland & Pagano, 2016; Walters, 2011). Business leaders must find creative ways to make budgets work and support operational effectiveness (Zashkiani, Rahmandad, & Jardine, 2011). The economics of safety can be costly for both fire departments and the public.

Fire officers must develop strategies to curtail the cost of injuries and fatalities of personnel. On average, 100 firefighters die in the active line of duty incidents each year in the United States, and more are injured or diagnosed with chronic illnesses associated with the fire service (U.S. Fire Administration, 2016). The cost to the fire department for a firefighter disability ranges from \$250,000 to \$400,000 (Ratchford, Carson, Jones, & Ashen, 2014). Patterson, Smith, and Hostler (2016) contended that the cost of a wellness program ranges from \$130 to \$150 per year per firefighter. Fire officer strategies for containment of safety costs affect the jurisdiction served by the fire department. Fire officers must be cognizant of the cost of injured and fatalities compared to the prevention costs.

The cost of safety either helps or hinders the service provided by the fire department. The amount of funds available for hazardous operations determines the

level of service a fire department can provide (Light, 2016). One source of competency in fire departments consists of intangible resources, which include knowledge and reputation (Fleming & Zhu, 2009). Providing strategies on a frugal basis assists fire officers in managing costs. Injuries and fatalities affect both financial and nonfinancial aspects of safety in the community. Leadership strategies encompass all aspects of hazardous operations cost management.

### **Leadership Strategies and Hazardous Operations Cost Management**

Leadership in business begins with the business leader's skills and performance in earning the trust of workers. Leaders who demand respect perceive that others should mutually trust and give respect (Eubanks, Brown, & Ybema, 2012). Interactions within organizations between workers and management relate to the success of the business (Vardaman, Gondo, & Allen, 2014). Ethical behavior is an expectation portrayed to management as a value (Vardaman et al., 2014). Ethical behavior and trust directly relate to leadership strategies affecting the perception of what is essential to managing costs of hazardous operations (Eubanks et al., 2012). Leadership strategies involve ethical behavior in every right. The role of fire officers is an ever-changing dynamic that requires buy-in from all levels, expanding from the traditional mindset of maintaining consistent leadership strategies.

The business leader's leadership strategies need to be consistent with the company's mission statement (Dillard & Layzell, 2014). The business leader's role differs from traditional roles because leaders are mediators, resource allocators, and disturbance handlers (Liu, Eubanks, & Chater, 2015). Leaders must function as role

models for practicing ethical behavior (Vardaman et al., 2014). Fire officers operate in the same manner as business leaders by assuming different roles and strategies to achieve organizational goals in an ethical manner.

Leaders should motivate and encourage their employees to perform ethically. Consistency and ethical business practices derive from leadership strategies that guide managers to operate within the parameters of their organizations' core values (Chen & Hou, 2016). Fire officers operate in an environment where every action is in the public's eye (Fleming, 2010; Fleming & Zhu, 2009). The fire officer must encourage staff to consistently follow the operating guidelines and strategies to maintain budgetary constraints. Along with consistency and ethical practices, the fire officer is responsible for promoting positive motivation.

Fire officers motivate fire fighters through leading by example. Leaders must remain motivated and maintain a general balance of their roles to keep fire departments operational (Dillard & Layzell, 2014). Fire officers coach fire fighters to follow operating standards in an ethical fashion including positive reinforcement. Companies might increase positive reinforcement through advanced leadership training (Mathieu, Babiak, Jones, Neumann, & Hare, 2012). The selection process of fire officers is critical to the success of the organization.

Fire officer selection is a difficult task that must be approached in an ethical and fair manner. Leaders who use selection tools that identify ethical standards and integrity may contribute to successful leadership selections (Vardaman et al., 2014). Fire officers not following procedures violate ethical standards and integrity. The Machiavellian

concept comes to light where leaders get what they want at any cost violating ethical standards (Eubanks et al., 2012). The Machiavellian concept, and its effect on the workplace and safety, could present mixed perceptions in leadership strategies (Eubanks et al., 2012). Machiavellianism affects leaders and their leadership strategies, competencies, companies, and identities (Eubanks et al., 2012). Fire officers maintaining integrity, and standards, and following the procedures, reduce the risk of lawsuits linked to hiring practices.

Leadership strategies are an important part of the hiring practices of businesses. Torres and Bligh (2012) asserted that regardless of the business or industry, hiring practices need to be the same with no inference of error. Fire officers in charge of hiring must follow the same procedures for each candidate regardless of any personal relationships. Nkomo and Hoobler (2014) revealed that some of the leaders might make exceptions for candidates of certain races while not affording the same considerations to candidates of other races. Hiring practices should remain the same for each candidate to project a positive business practice and reduce legal costs for the organization.

Stress in a business relates to negative business practices, ethical issues, and hazardous operations cost management (Vardaman et al., 2014). Stress management leadership strategies include variables such as education, job satisfaction, and work experience (Chen & Hou, 2016). Fire officers experience stress in both emergency and nonemergency situations creating a higher risk for errors resulting in increased cost. Leaders possessing the necessary skills to manage stress in organizations may discover new leadership strategies (Guo & Kapucu, 2015).

Companies search for qualities and leadership strategies, such as charisma, in leaders. Leaders who possess the abilities to make difficult decisions and visionaries for the future may be viewed with questionable characters (Mathieu et al., 2012). Leaders take risks in daily business; making the wrong decision may be detrimental to a company's bottom line (Simola, 2014). Fire officers are under the microscope of the public for each decision rendered in both emergency and nonemergency situations. The integrity of business leaders results in organizational success and satisfaction of employees (Torres & Bligh, 2012). Trustworthiness is a trait, and its application is a leadership strategy leaders need to ensure their operation is fruitful and safe (Leonard & Howitt, 2010).

Trust in business is a fundamental component to the success of an organization. Building and reacting to confidence among leaders culminates from stimuli in stressful or dangerous conditions, referred to as a *unitary construct*, based on perception (Kniffin, Wansink, Devine, & Sobal, 2015). Sharing leadership strategy sets and processes is a benefit to cross-industry businesses (Van der Voet, 2013). Fire officers must gain the confidence of their staff and the general-public to be effective leaders. Military decision makers, along with leaders from related companies, use similar leadership strategies to include managing from a distance (Reed et al., 2015). The fire department is structured in a paramilitary system using similar leadership styles (Fleming, 2010).

Leaders who manage employees from proximity to long distances produce both positive and negative relationships (Lilian, 2014). The perceptions employees have on leaders are either positive or negative and have a direct effect on business (Reed et al.,

2015). Military leaders have one-advantage, military leaders serving with the same group from the inception of their career (Reed et al., 2015). Fire officers share the same advantage as military leaders because they serve with a small group of fire fighters during their career. Civilian leaders do not share the same bond with employees because of higher employee turnover (Torres & Bligh, 2012). Military and civilian leaders share similar leadership strategies, perceptions and manage employees from distances with each having individual challenges (Iorio & Taylor, 2015). Fire officers manage multiple stations spanning various distances throughout cities.

Distance management can have positive or negative effect on an organization. One downfall to distance leadership is that leaders in related professions are confident in their abilities and believe they can beat any odds (Reed et al., 2015). Over confidence by fire officers not using leadership strategies leads to disaster (Light, 2016). Cohen-Hatton et al. (2015) researched nine categories of themes associated with success regarding leadership strategies in (a) organizations, (b) visibility, (c) availability, (d) attentiveness, (e), calmness, (f), knowledge, (g) authority, (h) communication, and (i) cooperativeness. Barrier interference with integrity include poor leadership strategies, lack of accountability, and poor corporate structure (Torres & Bligh, 2012). Fire officers experience barriers in every facet of the job and must devise leadership strategies to counteract the barriers (Fleming & Zhu, 2009).

Successful leaders need to develop a set of survivor leadership strategies that may enable success both personally and professionally (Demiroz & Kapucu, 2012). One of the primary attributes of a business leader is leadership strategies that influence the



behavior followers and accomplish goals through mutual collaboration with others (Mann & Islam, 2015). Fire officers work should influence the behavior of fire fighters to perform according to standards and strive to achieve the goals of the organization (Fleming & Zhu, 2009).

Collaboration breeds new problematic behaviors where employees viewed this concept as a free atmosphere instead of focusing on the organizational goals (Wang & Wang, 2014). Fire officers should use collaboration and empowerment as a leadership tool involving interaction with followers allowing autonomy to perform the job (Leonard & Howitt, 2010). Empowerment works in unison with leadership strategies necessary for both emergency and non-emergency situations for the business leader's success (Demiroz & Kapucu, 2012). Leaders use the leadership strategies of collaboration and diplomacy to transform the workforce by gaining their trust through autonomy (Wang & Wang, 2014). Goals are an essential part of leadership because the motivation to achieve goals requires sound decision-making along with a delegation and clear communication (Leonard & Howitt, 2010).

Another important piece of the leadership strategy equation is communication. Communication is important for businesses because the lack of communication leads to problems and misconceptions (Kniffin et al., 2015). Leadership in multi-organizations needs a sense of diplomacy to interact successfully with different personalities (Demiroz & Kapucu, 2012). Communication within the fire department can mean the difference between life and death (Fleming & Zhu, 2009). Communications must be clear with no room for misinterpretation (Borghesi, & Gaudenzi, 2012). Safety messages conveyed by

leaders during any given emergency could uncover deficiencies in leadership communication skill that may breakdown in the process (Simola, 2014).

Leadership of an organization involves preparing for the unexpected. Preparedness is a process that fits into the business portion of agencies in both emergency and non-emergency situations (Demiroz & Kapucu, 2012). Domestic preparedness in the United States involving crisis management employs leadership strategies (Mann & Islam, 2015). Fire officers are charged with preparing for both non-emergency and emergency using leadership strategies focusing on cost management (Fleming & Zhu, 2009). Crisis involving the public will most likely involve governmental leadership intervention (Demiroz & Kapucu, 2012).

Leadership in both crisis and non-emergency situations requires sense making. Crisis in the world demonstrated the need for preparedness instead of reactiveness (Mann & Islam, 2015). Leadership in a disaster situation involves taking charge of and influence personnel to understand they will recover from a catastrophe (Deichmann & Stam, 2015). Decision making is one of the most common duties of fire officers (Hardy, & Comfort, 2015). The fire officer' diplomacy in disasters involves leadership strategies that mitigate the situation and manage costs (Cohen-Hatton et al., 2015).

Flexibility in business is a leadership strategy that springboards decisions into versatility. Successful leaders follow rules of operation and possess the ability to adapt to situations exercising flexibility in their duties (Dillard & Layzell, 2014). Leaders set organizational plans into action with no contingency intend to compensate for changing conditions might be detrimental to their performance (Nutt, 2014). Fire officers are

trained to be flexible because of the changing emergency environments (Krasuski, Kreski, & Azowy, 2012). Variations in planning include the idea of flexexecution, a focus of redefining emerging conditions and ill-prepared goals (Hawe, Coates, Wilson, & Crouch, 2012). Fire officers encounter diverse situations where preparation and adaptability is paramount to manage the situations.

The simulation exercise is a true way to assess the leadership strategy capabilities of an organization's operational plans (Kaufman, Ozawa, & Shmeueli, 2014). The processes of learning from failed decisions through exercises are contributing factors to success or failure (Hawe et al., 2012). Employees learn from their mistakes on main events by conducting a complete review of the incident (Mumford et al., 2015). A critique of an incident or failed business event may reveal the leadership strategies and experiences for areas of improvement illustrating positives for the benefit of the entire organization (Hawe et al., 2012). Unforeseen challenges affecting business performance require sound decisions from leaders (Lloyd-Rees, 2016).

Natural disasters affect the cost management of hazardous operations through non-predictability and unexpected challenges. Salmon et al. (2014) posited that leadership and management during natural disasters affirm that leaders must be able to adapt to different situations (Salmon et al., 2014). Fire officers mitigate the challenges of natural disasters by concentrating on the immediate situation at hand without regard for any cost factor. Natural disasters related to businesses create a shock to the organization at all levels (Salmon et al., 2014). Successful leaders learn from mistakes and embrace the opportunity to share their experiences (Mumford et al., 2015). Leaders mitigate

organizational shocks by using leadership strategies that buffer, and prevent the shocks from integrating into the core of the business through TL (Salmon et al., 2014). Fire officers do not identify leadership strategies for cost management in advance of natural disasters.

Best practices and practices to avoid are important to the success of learning from mistakes. The application of best practice concepts removes negative factors that block learning (Torres & Bligh, 2012). As a common practice nationwide, fire officers normally have after emergency critiques to identify performance in both positive and negative aspects (Perry, Wiggins, Childs, & Fogarty, 2012). Some organizational leaders mislead facts to hide their errors (Vardaman et al., 2014). Leaders depend on circumstances that would not accept responsibility for their actions and deflect blame on other employees (Vardaman et al., 2014). Fire officers should take ownership for decisions positive and negative to maintain integrity creating learning opportunities (Fleming & Zhu, 2009). Specialized training courses and experience are keys to the business leader's transition (Wex, Schryen, Feuerriegel, & Neumann, 2014).

Organizational leaders need experience, training, and motivation to perform at the highest level (von Thiele Schwarz, Hasson, & Tafvelin, 2016). Transforming to the business leader role may enhance the company safety manager's performance of their department's relationship with executive leadership (Dillard & Layzell, 2014). Fire officers have a difficult challenge of adding business leader skills to fire department skills. Krasuski et al. (2012) argued hazardous operations experiencing a transformational period require leaders to take the part of leading and managing their

departments as businesses. Leaders possessing or acquiring new leadership strategies perform at a higher level increasing their organization's hazardous operations cost management performance, and bottom line (Iorio & Taylor, 2015).

### **Poor Leadership Strategies and Exposure to Risk**

When fire officers lack leadership strategies, they may not carry out their daily management functions. The implication is that leaders may not be in a position of planning, organizing, controlling, and ensuring proper audit and review (Sealy, Wehrmeyer, France, & Leach, 2013). Among the traditional duties of fire officers, the added responsibility of cost management creates new challenges (Fleming & Zhu, 2009). Poor leadership strategies within cost management increases the exposure to risk because of the lack of funds (Fleming, 2010). Fire officers may not have the ability and leadership strategies to identify the risks that threaten the safety of employees and the community. The exposure to risks of an unsafe working environment is a never-ending battle within every industry.

The effects of unsafe working environments depend on the level of job difficulty, the type of job, and the context of the job (Cooper, 2015). Certain types of jobs require advanced skills, experience, and require the demonstration of advanced competence to yield the required results (Antonakis & House, 2014). Workers exposed to risks such as handling unsafe equipment, and regular injuries because of unsafe equipment arising from the lack of leadership strategies of their hazardous operations leaders (Borghesi & Gaudenzi, 2012). Cooper (2015) contended the level of concentration of the employees reduces because they are in a constant state of fear of injury. The levels of performance

declines along with employee attendance making the entire organization perform poorly because of the lack of leadership strategies of managers (Ali, Jangga, Ismail, Kamal, & Ali, 2015).

The lack of leadership strategies in hazardous operations leaders contributes to employee morale and attendance resulting in turnover risk. Hazardous operations leaders lacking leadership strategies risk creating a hostile work atmosphere where employees do not want to go to work (Hogan & Foster, 2013). Cooper (2015) emphasized the number of staff who arrived for work would decrease and in effect eventually leave the company, affecting production levels. Public safety leaders include fire department, and police leaders must find the balance to find the strategies needed to decrease employee turnover, and increase performance. Reducing employee turnover decreases the cost of onboarding new employees, and the possibility of lawsuits (Sienkiewicz-Malyjurek, 2016). The ability to use leadership strategies to manage an organization's performance can reduce the risk of financial ruin (Nollenberger, Maher, Beach, & McGee, 2012).

Financial risks arise from unsafe working conditions that involve accidents and injuries. Upon the occurrence of an injury or incident, the leadership of the organization usually provides benefits or compensation to resolve the loss (Schaubroeck et al., 2016). Hubrich and Tetlow (2015) reported cases and incidents of this nature take place on a regular basis putting the company in financial risk of becoming insolvent. Hazardous operations leaders might avoid these risks by using a variety of leadership strategies to manage the hazardous operations of their organizations including sustainability (Smith et al., 2016). Sustainability, in this context, implies that hazardous operations leaders

have the leadership strategies to develop long-term goals that will assist their organization to thrive in a competitive environment reducing safety risks (Mansour, 2016).

### **Poor Leadership Strategies and Business Sustainability**

Leadership strategies play an important part of business sustainability to hazardous operations cost management. Essentially, sustainability attributes to proactive business and safety planning (Mann & Islam, 2015). Sustainability must focus on environmental issues and monitor the safety of a company (Koc & Durmaz, 2015). Hazardous operations leaders lacking leadership strategies face challenges related to business sustainability efforts, economic benefit, and budgetary constraints.

Budgetary constraints exist in businesses of all types, and the lack of leadership strategies exhibits simple approaches to sustainability efforts. Businesses must have a sustainability plan implemented in the event of an actual emergency to remain operational (Ihlanfeldt & Mayock, 2014). Managers identified as transformational leaders have the leadership strategies to cause influence to improve business sustainability (Deichmann & Stam, 2015). Hazardous operations leaders have the task of communicating sustainability programs and must demonstrate significant influence to the workforce.

Influencing sustainability may fail if communication and relationships diminish. Communication failure in sustainability programs may result in the lack of leadership strategies of the manager not presenting all the facts (Cetin & Kinik, 2015). The result is that sustainability programs may not communicate the objectives and goals of the

organization. Failure of communication in business sustainability programs might have consequences for an organization that includes a waste of resources, which impacts the organization's finances (Chen, Zhang, Zhang, & Xu, 2015). The lack of leadership strategies of managers may produce a result of financial and operational decline to the organization.

### **Role Model's Leadership Strategies**

Fire officer's expectations to lead by example enhance safety management within their areas of work. Leaders act as transformational leaders who have the potential of invoking change to the employees in the organization (McKleskey, 2014). Role models should lead by example to stimulate safety by engaging in safety-related activities (Borghesi & Gaudenzi, 2012). Fire officers should serve as the role model leaders to stimulate proper actions of followers promote effective cost management actions (Pilbeam et al., 2016). Leading by example is a leadership strategy that involves hazardous operations leaders possessing the responsibility of attending to the safety needs of the employees of their organization.

The hazardous operations leader discusses with staff their needs regarding workplace safety (Pollack et al., 2017). Lack of attention to the needs of employees sets the stage for poor performance and the employee's perception of managerial trust and integrity (Deinert, Homan, Boer, Voelpel, & Gutermann, 2015). Poor performance leads to injuries, which incur additional costs linked to worker's compensation, disability, and death benefits thus reducing the fire department's operating budget. Hazardous operations leaders demonstrate interpersonal leadership strategies with the employees



making obtaining information not possible, and issuing complaints relating to the safety of the employees (Villemain & Godon, 2016). Role models using the leadership strategy of demonstrating compassion to employees are an indicator they value the safety of the employees in the business and encourage innovation. Fire officers earning trust develop an open dialogue with employees increasing the possibility of safer performance.

Hazardous operations leaders should demonstrate intellectual stimulation in which they have the responsibility of encouraging the employees to become creative and innovative (Sienkiewicz-Malyjurek, 2016). Leaders should promote safety enhancement performance by supporting employee creativity (Borghesi & Gaudenzi, 2012). The creativity of employees creates a sense of autonomy that gives employees confidence that assist in the identification of possible factors that may cause unsafe environments (McKleskey, 2014). Promoting consistent creativity is a leadership strategy that hazardous operations leaders must possess to inspire and motivate their workforce to increase hazardous operations.

One driving force for role models is inspirational motivation. Hazardous operations leaders have the role of inspiring motivation to employees to manage hazardous operations in the company (Smith et al., 2016). Employee's motivation and inspiration improve the levels of their safety in the work environment (Chen & Hou, 2016). The role models are at a position of linking the employees with safety goals in the company through inspirational motivation of the safety business vision.

The business vision of safety is critical in ensuring that safety goals and objectives achieve a positive outcome in managing hazardous operations within the

company (Borghesi & Gaudenzi, 2012). The leadership strategy of leading by example demonstrates a firm commitment from the safety manager to the goals of the business (Luo & van den Brand, 2016). Leadership strategies used by fire officers should provide positive direction for staff encouraging positive safety procedures while remaining cognizant of cost management measures (Fleming, 2010). Encouragement of employees to have a positive attitude toward safety improves a hazardous operation that includes the company's business vision (Perry et al., 2012). The suggestion that employee's confidence puts safety as the priority of everyday operations assures the organization's safety plan is viable.

Hazardous operations leaders as role models have the power of imparting confidence and trust as leadership strategies regarding safety to the employees (Geisler, 2014). Once employees have confidence and trust in the safety environment, they are likely to ensure the enhancement of safety (Geisler, 2014). Chen and Hou (2016) proposed the implication that employees can faithfully exercise their role of ensuring hazardous operations performance through verifying the hazardous operations leaders through effective leadership strategies. Hazardous operations leaders must communicate the goals and the policies that govern safety environments by defining the safety goals and policies through leadership strategy adaptability (Chen & Hou 2016).

### **Leadership Strategy Adaptability**

Leadership strategy adaptability is healthy for companies because transformation introduces new ideas (Kasdan, 2015). The influences of business leader's tenure and performance affect the outcome of hazardous operations performance in their

organizations (Souder, Simsek, & Johnson, 2012). Fire officers must continually keep up with new concepts in the fire service because remaining stagnant derails the performance of the organization (Cooper, 2015). Kasdan (2015) exhibited the perception of chief administrative officers of businesses illustrate different opinions ranging from well-prepared threat perception to a quiet sense of threat perception derived from leadership strategies. Souder et al. (2012) revealed that chief executive officers (CEOs) who start an organization do not have the requirement to possess or needed to obtain the necessary business skills to manage their organization. The CEO hired after the founding CEO has the requirement to either have or obtains the same leadership strategies (Souder et al., 2012). Leadership strategy versatility may be difficult to attain and execute when company expansions require the strategy, skills, and business plan adjustment of the new business leader (Fernandez, Noble, Jensen, & Steffan, 2015).

Measurement of business plan effectiveness may be accomplished by surveys revealing new emerging data (Kasdan, 2015). Survey information is only as good as the information provided and may render false representations of the task at hand, rendering the survey null and void (Hawe et al., 2012). Fire service planning involves senior leadership with possible input from junior officers (Fleming & Zhu, 2009). Operational staff commonly do not have input in the direction of the fire department creating feelings of distrust (Conchie, Moon, & Duncan, 2013). Disgruntled stakeholders' inaccurate information can change the intent of the survey unless there are checks and balances implemented (Fernandez et al., 2015).

Business transformation includes cost saving measures such as the introduction of virtual teams (Artinger, Peterson, Gigerenzer, & Weibler, 2015). Leaders managing business climate transformation and their effect on operations expound on the theory of massive discontinuous transformation in organizations (Winn, Kirchgeorg, Griffiths, Linnenluecke, & Gunther, 2011). Fire officers experience similar challenges as business leaders leading assigned staff from alternate locations (Fleming, 2010). Transformation in the fire department is difficult because of multiple locations of fire stations and the conveyance of the change (Fleming & Zhu, 2009). Leaders encounter change including organization transformation, which puts people on the defensive outside their comfort zones (Kaufman et al., 2014). Organizational development linked with increased leadership strategies, and transparency may be necessary to succeed in the development of the organization and possibly transform the industry affecting the economy (Lang & Ohana, 2012).

Organizational development consists of business structures, transparency, and includes the hazardous operations for each functional division (Cicala, Bush, Sherrell, & Deitz, 2014). The growth of nonprofit businesses outweighs the private for-profit businesses because of the need to break even (Cicala et al., 2014). Organizational development in the fire department is challenging as the department is under the public microscope to maintain cost and must remain transparent in every respect (Temporado, 2012). Specified public entities collaborating with private firms and nonprofit organizations are essential in developing networks of powerful alliances (Stam, Arzlanian, & Elfring, 2014). Regardless whether private or public, leaders who

collaborate with similar organizations sharing the same hazardous operations measures might spark new ideas for improvement and generate consistency (Pilbeam et al., 2016). Fire officers should collaborate with business leaders and consultants to find the best leadership strategy practices for managing costs (Smith et al., 2006). The collaboration of both private and public leaders may share unique leadership strategies to facilitate organizational transformation (Wang, Qi, & Wang, 2014).

Organizational transformation requires leadership to encourage employees that reside in geographically dispersed areas operating within virtual teams to use consistency to reduce start-up time for projects. Virtual teams have a distinct advantage of being multicultural diverse (Lilian, 2014). Lang and Ohana (2012) contended there is an ongoing debate whether there is a disadvantage of non-verbal signals through body language in a virtual team environment compared to face-to-face meetings. Fire officers lead assigned teams from virtual locations that include multiple fire stations located within a specific geographical area (Fleming, 2010). The greatest challenge for the fire officer leading organizational transformation is to convey the message to multiple locations in a lead by example manner (Clarke, 2013). Leaders operating in different geographical locations allow members to be frank without the stigma of face-to-face meetings and keeping a profitable company is an adaptable leadership strategy that may have different outcomes.

Adapting leadership strategies have positives and negatives in the performance illustrated inconsistent leadership strategy approaches (Lang & Ohana, 2012). Adaptability of leadership strategies requires that all levels of business regardless of the

management position apply a consistent method that produces favorable results (Nielsen, Skogstad, Matthiesen, & Einarsen, 2016). The limits of leadership strategies in business consist of avenues, implications, and tend to identify leadership practitioners (Lang & Ohana, 2012). The fire department a dynamic business model that incorporates paramilitary, traditional business, and emergency operations (Cohen-Hatton et al., 2015). The challenge for the fire officer is to find the best leadership strategy for each situation to manage the fire department as a business (Light, 2016). Maintaining business integrity and consistency through leadership strategies, assists in improving change success for organizations, which may warrant the need for leadership strategy training (Steyn & Niemann, 2014).

### **Leadership Strategy Training**

Leaders who manage hazardous operations have different skill sets with similarities (Ayala & Manzano, 2014). Poor operational results and increased on-the-job injuries may indicate the need for re-evaluation (Kaufman et al., 2014). Professional development may be the answer to successful performance and increased awareness for personnel (Puteh, Kaliannan, & Alam, 2015). Advanced skills training prepares employees for future leadership positions (Hardy & Comfort, 2015). Fire officers should strive to increase their knowledge and skills to reduce poor performance both the operational and business sense (Light, 2016). Some fire officers may be resistant to additional training especially with regards to business as this may be perceived as not within the job description (Smith et al., 2016). Leaders in businesses encounter barriers

such as time, expense, availability, and adequate training programs that inhibit the acquisition of advanced leadership strategies (Hardy & Comfort, 2015).

Advanced leadership strategies obtained from technical schools and colleges with business and safety service programs pose challenges mainly about scheduling and courses availability (Hardy & Comfort, 2015). Preparing personnel for the future stems from a collaborative effort from both academic administrators and leaders (Hibbert & Cunliffe, 2015). Leadership strategy and general business acumen programs offered by technical schools and colleges provide best practices throughout the business world (Hibbert & Cunliffe, 2015). Training for fire officers consist predominantly of fire and emergency training but do not provide business related training (Temporado, 2012). Leaders can hone their leadership strategies through decision performance and practical training sessions that equate to their company's objectives (Hibbert & Cunliffe, 2015). One success factor in the advanced leadership strategy training is support from management (Hibbert & Cunliffe, 2015).

Advanced leadership strategy training sponsored by senior management is the key to business growth when new concepts integrate with an organization's objectives (Hibbert & Cunliffe, 2015). The decision process of daily operations in the fire department requires fire officers make decisions in both emergency and non-emergency situations (Hardy & Comfort, 2015). Senior fire officers serve as mentors for the junior fire officers conveying lessons learned with new trends and concepts (Fleming, 2010). The decision process interfaces using scenarios including groups with experienced and less experienced leaders that may reveal new innovative leadership strategies (Perry et

al., 2012). Integration of leadership strategy training consists of different forms of decision-making that enhance a manager's performance and must work in unison with experience (Dillard & Layzell, 2014). Leadership training programs that incorporate decision support devices reduce cognitive demands because of the significant differences between experienced and less experienced leaders about their analytical skills (von Thiele Schwarz et al., 2016).

Successful increases in analytical skills culminate through the support of senior leadership by sponsoring on-the-job and business-sponsored degree programs that included bachelor and master of business administration (Hibbert & Cunliffe, 2015). Business and daily performance have some degree of risk that may increase the incentive of bonuses and piecework (Hardy & Comfort, 2015). Advanced leadership strategy training for top management personnel of business and hazardous operations might decrease the risks taken during emergencies (Perry et al., 2012). Fire officers continually analyze both emergency and non-emergency situations (Fleming, 2010). Increased analytical skills for fire officers may reduce risks and the costs related to the fire department budget (Fleming & Zhu, 2009). Analytical leadership strategies is a fundamental element in everyday business regardless of the function and include risk taking that has a degree of human error factor attached.

Businesses, in general, have a certain level of risk in their hazardous operations because of unanticipated consequences of human error (Stergiou-Kita et al., 2015). Risks in business vary with each having a specific degree of severity (Daniel, 2015). Helyer and Lee (2012) represented advanced leadership strategy training may be



essential for managing daily hazardous operations. Specialized leadership strategy training that focuses on incident debriefing assists in the mitigation of emergencies (Stergiou-Kita et al., 2015). Human error is a contributing factor reduced through advanced leadership strategies used during incident debriefings (Stergiou-Kita et al., 2015). The fire officer must fill the gaps related to operational issues with flexible leadership strategies to reduce risk and minimize the overall cost (Temporado, 2012). The creation of lessons learned while promoting best practices for sound decision-making affects the health of the organization (Perry et al., 2012).

Businesses function with leaders making decisions that influence the success of their organization (Hibbert & Cunliffe, 2015). The lack of advanced leadership strategy training may be detrimental to any company (Hibbert & Cunliffe, 2015). Advanced leadership strategy training work in unison with experience producing positive results (Stergiou-Kita et al., 2015). Businesses fail because of poor decisions made by leaders because of a lack of knowledge and leadership strategies. Hazardous operations planning reduces the risk of failure by using advanced leadership strategies (Stergiou-Kita et al., 2015).

### **Leadership Strategies for Planning**

Fire officers have various leadership strategies for the process of planning to manage hazardous operations. Fire officers should develop a plan that conforms to the health and safety policies identifying the state of hazardous operations performance within the organization (Temporado, 2012). Cooper (2015) affirmed managers are in a position of identifying the state of safety within their organization. Fire officers plan for

actual hazardous operations (Leonard & Howitt, 2010). However, the effects of effective leadership strategies define the terms of negative results such as such as ill health, injuries, accidents, or losses (Smith, 2016). Effective leadership strategies and effective planning by fire officers contribute prevention that derives from identification, elimination, and controlling risks.

Prevention results from an effective hazardous operation leadership strategy. Planning conducted by fire officers affirms prevention with the operational procedures and goals identified align with the organizational goals meeting or exceeding safety standards (Krasuski et al., 2012). Precautions are governing hazardous operations in the workplace, as well as safety, must clearly define every facet of the plan (Banks et al., 2016). To enhance safety, fire officers use effective leadership strategies in the process of planning (Fleming & Zhu, 2010). Planning involves setting objectives, identifying precautions in the workplace, establishing risk control systems, developing management framework, set up standards of performance, giving priority to safety based activities, and implementation of the health management system. Fire offers must plan in every facet of the fire department to ensure safety and cost effective operations (Chalfant & Comfort, 2016).

Safety objectives are realistic, measurable, specific, and have a time scale with consent with the developers (Marucci-Wellman et al., 2015). Safety objectives can be in the form of either short-term or long-term and should align with the aims and goals of the organization (Sears, Blonar, & Bowman, 2014). Heyler and Lee (2012) speculated leaders have the responsibility of keeping personal agendas and biases separate from

objectives of the organization. Fire officers use specific leadership strategies that keep sensitive tasks such as safety objective development separate from personal goals.

Personal goals should not interfere with the objectives of an organization (Heyler & Lee 2012). In cases where the original planning process may not be favorable because of personal goals, the focus and emphasis of strategic planning training may refocus employees (Steyn & Niemann, 2014). Refocusing employees enhances planning approaches, which in turn leads to productive workplaces (Helyer & Lee, 2012). Developing objectives might require leaders to analyze the planning process including employee capabilities, laws, and national standards to accomplish planning (Fernandez et al., 2015). Fire officers use leadership strategies to enhance safety planning by re-engaging personnel to be innovative, resulting in new emerging results to exercising control over threatening risks and developing precautions (Alamdar, Kalantari, & Rajabifard, 2016).

The development of precautions in the workplace involves establishing risk controls. The development of precautions governing hazardous operations in the workplace involves three main stages, which include peril identification, control of risks, and assessment of risks (Hogan & Foster, 2013). Risk precautions in the workplace are not all inclusive because the best program needs leadership daily (Borghesi & Gaudenzi, 2012). Fire officers should continually monitor the fire department identifying risks and devising mitigation controls (Hardy & Comfort, 2015) Examining the workplace is a function that should support the leadership strategies of senior leaders and surveillance of constant risk control (Conchie et al., 2013).

Development of an appropriate risk control system can mean the difference between success and failure of an organization's safety program. Risk controls ensure the risk profile of an organization by identifying higher risk hazardous operations (Chen & Hou, 2016). Hogan and Foster (2013) espoused leadership strategies used by leaders contribute in developing risk controls by the selection, definition, and implementation of controls to include acceptance by the workforce. Leadership strategies contribute to the development of risk control measures and link into the leadership framework of the process.

Management framework established by fire officers using leadership strategies as appropriate for their given organization assists in defining the appropriate safety management that aligns with an organization. Alignment includes factors such as policy, planning, reviewing, auditing, measuring the performance, and organizing (Hajmohammad & Vachon, 2014). Incompetent managers contribute the downfall of an organization's success by not possessing the necessary leadership strategies to manage hazardous operations regardless of the caliber of management framework already implemented (Cooper, 2015). Leadership strategies are important to managers and leaders in all facets of safety including evaluating the management framework through performance standards (Chen & Hou, 2016).

Performance standards require the identification of the roles involved in the operation of safety management systems (Koc & Durmaz, 2015). The standards of performance for various organizations require the development, design, and installation of efficient, safe management systems (von Thiele Schwarz et al., 2016). Lack of

monitoring of the safety management systems leads to deficiencies, which increases injuries and cost (Luo & van den Brand, 2016). Throughout the planning process, fire officers that use the leadership strategy of involving employees defining safety standards develop an appropriate safety culture and leading to social change.

### **Social Transformation**

Businesses incorporate social transformation that can be both positive and negative to the workforce (Saetrevik, 2015). The effects of social transformation can reveal social capital as a related skill for promoting performance. Employees have a need to belong to their community that filters into the society (Chittaro & Buttussi, 2015). Social transformation in business can be positive or negative depending on the leadership strategies of their manager (Gillen & Morrison, 2015). Social belonging in the workplace is important for employees, their company, and work schedule in relation to hazardous operations.

The work schedule of a business plays in the success of each operational function along with their leader's skill and direction. Part-time workers that perform safety-related functions average three workdays per month, which allows ample time for recovery from stressful calls (Stam et al., 2014.) The demands of full-time workers who perform safety-related functions have a shorter recovery time that equates to stress overflowing into their home and social lives (Saetrevik, 2015). Support services for both part time and full time employees within organizations may contribute to a safer environment reducing injuries and cost (Hajmohammad & Vachon, 2014). Regardless of the recovery time, a part-time worker away from work may not take advantage of the

support services as their full-time counterparts in both on and off duty status (Bergamaschi & Randerson, 2016).

Work schedules and stress continue to affect the employee both on duty and off duty that may create a new set of problems. The functions of workers performing hazardous operations involve demands that cause critical incident stress and psychological issues, which affect the functionality of their organization (Bergamaschi & Randerson, 2016). The challenge is to provide an essential social transformation in services and support preventive measures to protect workers performing safety-related functions (Saetrevik, 2015). Further study is about the leadership strategies of fire officers and their social interaction with the public regarding social transformation (Salmon et al., 2014).

Social transformation involves the functions of business that affect the employee's daily life (Santos, 2012). The need for social transformation in businesses provides employees with improved conditions and situational awareness (Chittaro & Buttussi, 2015). The conceptual framework of the growing phenomenon, the lack of leadership strategies showed that business leader's affect business by redirecting resources to socio-business problems (Santos, 2012).

Social transformation in safety-related firms is an ongoing endeavor improving safety for both safety personnel and the people they serve regardless of socio-business problems (Krasuski et al., 2012). Gillen and Morrison (2015) agreed that a leadership change in businesses transforms hazardous operations. Process transformation improves safe environments to create social transformation through hazardous operations leaders

and their leadership strategies standardizing processes with low-error margins (Fernandez et al., 2015). Fire officers strive for social transformation of safety improvements through leadership strategies focusing on efficiency, and cost management for private citizen protection along with fire department personnel (Temporado, 2012). Leaders with a mission to transform the efficiency of hazardous operations rely on the leadership strategies of the leader to transform employee behavior and motivate personnel to perform at higher levels (Pilbeam et al., 2016).

Social transformation is ever changing, and companies adapt to changes daily with expectations of higher performance (Stam et al., 2014). Social transformation in business can range from employee behaviors to corporate policies. The business leader must have or acquire the necessary skills to manage or create positive change through a specific leadership style (Bergamaschi & Randerson, 2016). Fire officers using TL focus on leading by example to achieve the organizational goals (Deichmann & Stam, 2015). Leaders make positive change through leadership strategy adjustments that result in a variety of factors such as product improvements, market changes, and cultural changes (Santos, 2012).

### **Transition**

The body of literature contained within the literature review relates to leadership strategies and the effects of managing hazardous operations. The information in Section 1 included the foundation of the study and exploration into the relationship of leadership strategies for managing hazardous operations. The theories discussed in the research

explored the problem, leadership, hazardous operations in business, leadership strategy, adaptability, business skill training, and social transformation.

Section 2 includes a discussion of the purpose of the study, my role as the researcher, and selection of participants in the target area. I also illustrate the procedures, methods, and validation procedures needed to conduct the study. Section 3 will conclude with the results from data collected through interviews, conclusions, how the study applies to professional practice, implications for social transformation, and personal recommendations.



## Section 2: The Project

Leadership strategy is used to manage hazardous operations daily. The business of hazardous operations management affects both the operational and fiscal performance of the organization (Trussel & Patrick, 2013). My research study fills the gaps pertaining to the leadership strategies needed for managing hazardous operations (Stergiou-Kita et al., 2015).

The specific business problem that I addressed was some fire officers lack strategies to manage the costs of hazardous operations. In Section 2, I describe how the identification of the fire officer's roles and the selection of participants meet specific criteria related to the population and sampling for the research study. Section 2 includes the specific areas of research methodologies, research design, ethical research practices, data collection, data analysis procedures, and the reliability and validity of the research about the research study.

### **Purpose Statement**

The purpose of my study was to explore leadership strategies that fire officers use to manage costs associated with hazardous operations. The target population included 10 fire officers within a single fire department located in central Wisconsin who were successful managing costs associated with hazardous operations. The implications for social change include the potential to decrease cost while saving lives to promote community trust of the fire department.

### **Role of the Researcher**

I was the primary data collection instrument in this qualitative research single case study. Yin (2015) conveyed the researcher as the primary research instrument. Collecting valid reliable data and answering the research question for the research qualitative case study are imperative to the integrity of the study (Yazan, 2015). I identified leadership strategies of fire officers in managing hazardous operations through interviewing and observing nonverbal communication. Interviews and observation allow the researcher to obtain additional information through multiple communication avenues (Marshall, Cardon, Poddar, & Fontenot, 2013). Researchers use the qualitative method to explore phenomena and to provide an interpretation of the meanings (Yin, 2015). Collecting data for the research study involved interviews, member checking, and methodological triangulation with current fire officers.

I have significant related experience to the research study topic as a manager in different sectors of fire companies for the past 2 decades. According to Baskarada (2014), researchers and interviewers should have relevant subject matter expertise in addition to interviewing skills. Collaboration accompanied with leadership decision-making in the areas of business strategy, business plan development, innovation, organizational restructuring, and hazardous operations dovetails into a common connection (Smith et al., 2016). I managed various levels of hazardous operations at different levels. During my tenure in senior management positions, responsibilities included the transformation of personnel at every level.

The Belmont Report is a guide for researchers as they conduct research studies to maintain the participant's human rights (Brakewood & Poldrack, 2013). The Belmont Report is used to ensure participants' treatment is respectful and equal by using a structured procedure (Yazan, 2015). The purpose of the Belmont Report is to ensure (a) respect for persons, (b) beneficence, and (c) justice (Brakewood & Poldrack, 2013). Finally, maximizing the possibility of benefits from the interviews and minimize the possibility of harm to the participants enhance the integrity of the study (Brakewood & Poldrack, 2013).

The potential of bias exists because of my experience in the fire service. Viewing data from a nonpersonal lens mitigated bias. The assurance of privacy of the participants throughout the research study was paramount. The established protocol identifies the participants only by an alphanumeric code with the cross-referenced legend secured in my office. The presentation of each interview question in the same manner for each participant maintains consistency (Marshall & Rossman, 2016). The participants in my study had a choice to withdraw during the research study any time by verbally communicating their intentions (see Plankey-Videla, 2012). Each participant voluntarily signed an informed consent form before the interview (see Marshall et al., 2013). An explanation to participants of audio recordings of their responses to interview questions occurred before the interview. The affirmed transparency of the interview process includes divulging all aspects to participants before the interview process (Ali & Yusof, 2011).

Interviews must have a sense of order, which includes the establishment of an interview protocol (Denzin & Lincoln, 2011). Interview participants following the established protocol keep the study on track maintaining the same procedure for each participant (Marshall et al., 2013). The rationale for an interview protocol is to explore phenomena from the leadership strategies used by the participants, thus uncovering successful leadership strategies while providing an interpretation of their meanings (Marshall & Rossman, 2016). The same interview protocol ensured fire officers ascertained the successful leadership strategies used to manage hazardous operations.

### **Participants**

The eligibility criteria for study participants in my research study consisted of fire officers which have successfully managed hazardous operations for 5 years in a single fire department. To become a fire officer, personnel must meet specific officer qualifications that include management of fire department operations and services (NFPA, 2014). Following IRB requirements prior to beginning the study, a written consent form signed from participants maintained ethical protection, and reaffirmed voluntary participation. The fire chief received the research study criteria for participant recommendations. Experiences with the research phenomenon forms the basis of a study's participant's criteria (Moustokas, 1994). Upon receipt of the list of participants from the fire chief, initial contact starts with each potential participant by telephone. The decision authority of fire officers on hazardous operation scenes contributes to the success or failure of the operation (Cohen-Hatton et al., 2015). Fleming (2010) confirmed the implementation of strategies during hazardous operations ultimately fall

on the fire officer on scene. The eligibility criteria is an essential portion of the study and participant alignment (Bhakta Bhandari, 2014).

The fire chief in my research study fire department was the primary contact assisting with the identification of potential participants, and provided contact information. The establishment of rapport sets the stage for a comfortable, and trusting atmosphere (Marshall et al., 2013). The participants included fire officers of all ranks that met the research criteria of having at least 5 years of experience as a fire officer responsible for managing hazardous operations. The fire chief was the gatekeeper of the fire department (NFPA, 2014). Upon completion of the selection process, the release of the selected participants prior to releasing telephone numbers. James, Pilnick, Hall, and Collins (2016) asserted the importance of participant approval and maintaining anonymity. The participants have the opportunity of meeting at an offsite location ensuring their confidentiality and anonymity. Upon obtaining the contact information of research participants, contact begins to establish rapport.

Initial contact was necessary to establish a purpose by answering any questions about the study or intentions. The purpose of answering questions from participants prior to interviews clarifies the intent of the study (Denzin & Lincoln, 2011). Providing transparency with participants was important to the success of a study intentions (Yin, 2015). Establishing rapport during the initial contact sets the stage for open dialogue including the explanation of the study and answering questions (Rosenthal, 2016). After the initial phone call, participants receive an email correspondence with an attached copy of the consent form specifying instructions for their review. The use of consent

forms by the researcher solidifies in writing the intentions of the study and all related factors (Yazan, 2015). At the meeting place, casual conversation begins with the participants to create a sense of ease and establish a casual conversation with the participants building rapport. Researchers establish casual conversations to create a sense of ease at the initial meeting with participants (Marshall et al., 2013).

The participants must align with the overarching research question by meeting the eligibility criteria and have knowledge of the research phenomenon. Bhakta and Bhandari (2014) confirmed the importance of eligibility matching participant's knowledge of the research presented. The criteria established for the research study ensures the participants have the necessary background and experience to answer the interview questions. Lloyd-Rees (2015) specified the necessary background required for participants relating to management experience. Fire officers have experience and training in strategy and tactics used to manage hazardous operations (Light, 2016). The success of hazardous operations correlates to the management experience and training of fire officers (Fleming, 2010). The main objective addressed the research question using the interpretations of the data collected.

### **Research Method and Design**

In this section, I describe the three methods of research and identify the research method appropriate for the research study. After identifying the research method, a comparison of the three research designs solidifies the identification of the design for this research study. **Finally, in this section**, I illustrated how the identified method and design works in relation to the study.

## **Research Method**

The specific research method of the research study was qualitative. The research study involved the exploration of the leadership strategies used by fire officers to manage hazardous operations. Researchers use the qualitative method to address the phenomenon by using open-ended questions through data collection, data analysis, and forming conclusions (Yazan, 2015). The qualitative method is used to understand the why of behaviors and actions (Rosenthal, 2016). Data acquired through the qualitative method, in the final analysis, may allow researchers to form logical conclusions (Denzin & Lincoln, 2011). The research study consisted of the exploration of fire officer strategies through open-ended questions while collecting, and analyzing data to form a conclusion (Rosenthal, 2016).

The quantitative method would not be suitable for the research study. The focus of the research study is to explore behaviors not examine quantifying variables (Rosenthal, 2016). Bernard (2013) demonstrated the use of quantitative research to test theories and variables. The quantitative method involves measuring relationships through hypothesis and statistical equations (Zehir, Cinar, & Sengul, 2016). Howitt and Cramer (2011) conveyed the use of quantitative methods examine statistical data that reaches copious participants.

Mixed methods was not appropriate for the research study. The use of the qualitative method assisted in the exploration of participant behaviors gaining a deeper understanding of the phenomenon. Mixed methods use a combination of both quantitative and qualitative methods measuring statistical data with themes from

interviews (Bamberger, Tarsilla, & Hesse-Biber, 2016). The mixed methods approach does not allow the researcher to discover new data and understanding by talking to people exclusively (Sparkles, 2014). Mixed methods would not be suitable because there are no theories and variables to test not addressing the problem statement (Ahmedshareef, Petridis, & Hughes, 2014).

### **Research Design**

Based on the selection of the qualitative methodology, consideration of three design options includes case study, phenomenology, and ethnography (Yin, 2015). The case study was the selected design for the research study. The case study design was appropriate for addressing the research question and gaining a deeper understanding of participant's perceptions. Gaining a deeper understanding of the participants' responses clarifies and may answer the question (Chambers et al., 2013). Single case study research explores a specific group on an in-depth level of activities (Marshall & Rossman, 2016). The use of the case study design may ascertain strategies, procedures, decisions, and the methods of implementation by participants through similar themes and triangulation of records (Chambers et al., 2013).

The phenomenological design was not suitable for this study. In the phenomenological design, the focus consists of study participants describing rather than explaining the facts (Moustakas, 1994). The focus of the research study was the exploration of fire officer's leadership strategies managing hazardous operations not lived experiences of groups. The study of a phenomenon may involve extensive engagement with participants to develop patterns and form relationships (Sharma &



Aniket, 2014). An explanation of the data collected through interviews is needed where participants may convey their perceptions strategies for managerial decisions. Yap and Webber (2015) contended the phenomenological design emerges over time based on experiences.

An ethnographic design would not be appropriate for the research study because the focus explored fire officers' leadership strategies not to focus on cultural groups. An ethnographic design involves the study of groups of people in their natural environment (Marshall & Rossman, 2016). The interviews consisted of fire officers that manage hazardous operations answering semistructured open-ended questions.

Ethnography involves copious time commitment to observations with participants (Bernard, 2013). Yazan, (2015) asserted in ethnography behaviors are examined along with the observations of the group over time.

During the research single case study, reaching saturation was an item of importance. Interviews continued until the same responses continue to be conveyed. Saturation occurred when no new information was revealed and the same information repeated (O'Reilly & Parker, 2013). Data collection for each participant remained the same, which maintained the study's integrity. During interviews, the collection of data continued until the same information arose, and saturation occurred. Data saturation achievement existed through; continuous interviews until the data collected repeated (James et al., 2016). Continuing beyond the stated number of participants ensured there were no existing gaps (Bernard, 2013).

### **Population and Sampling**

The sampling method selected was purposive. In the purposive sampling, researchers use their judgment for selecting participants most likely to provide data to address the research problem (Yazan, 2015). The purposive strategy may be based on years of experience, location and size of the participant group (Riordan et al., 2017). The purposive sampling method for researchers gains a multi-perspective view of research studies. Researchers use the purposive method to gain knowledge from experts based on specific criteria (Molenberghs et al., 2014).

The participants for the research qualitative case study consisted of 10 fire officers that managed hazardous operations within a single fire department. Arasti, Khaleghi, and Noori (2016) displayed a sample size of 10 corporate leaders through interviews exploring corporate strategy with technology strategy. A smaller purposive sample size of 10 participants with diverse experiences may provide sufficient information for a specific problem (Malterud, Siersma, & Guassora, 2016). Baskarada (2014) argued there is no definitive number of participants required to conduct a study.

Achievement of data saturation occurred when no new information was discovered and the same answers to the interview questions repeat. During the interviews, clarification of answers and asking follow-up questions revealed new information. Member checking in my research study ensured the accuracy of participant's answers. Upon completion of the transcripts, participants reviewed their responses in a scheduled meeting. Saturation is a major component in the validity of a qualitative study (Bernard, 2013). The researcher must ensure data is sufficient,

emerging data from participants may fill the gaps needed to address the research question (Shrestha & Joshi, 2015). During the interview process, a sense of vigilance occurred being cognizant of common responses revealing no new information (Bernard, 2013). As the interviews progress participants repeating the same responses may be an indication that saturation occurred (O'Reilly & Parker, 2013).

The selection process was to identify at least 10 fire officers that meet the selection criteria and manage hazardous operations. Daniel (2012) conveyed that it is appropriate in a single case study to use a population of 10 participants. Flick (2014) posited selecting 10 to 15 participants for a single case study is acceptable. Yin (2015) confirmed the use of 12 participants in a single case study. The eligibility criteria for selecting participants consists of fire officers with at least 5 years of experience who manage hazardous operations within fire departments. The criteria for research studies ensures that participants possess the required experience needed to provide essential data to the study (Yap & Webber, 2015). Experienced fire officers are likely to speak openly knowing the interview purpose is to enhance the industry from their experiences (Fleming & Zhu, 2009).

Interviews commenced within the organization's conference rooms, offices, or an offsite location with permission from the fire chief. Interviews consisted of the face-to-face method and at the participant's convenience. Interview settings consisted of a quiet place with no distractions and had a sign on the door to illustrate that interviews are in progress do not disturb (Marshall et al., 2013). A neutral off site location was the ideal location for interviews to eliminate distractions and maintain anonymity (James et

al., 2016). Denzin and Lincoln (2011) embraced the face-to-face method as the desired method of interaction with the participants. Private interviews with the elimination of distractions, produces greater candor (Rosenthal, 2016).

### **Ethical Research**

The informed consent process begins with a telephone call to ascertain the participation in the study (Plankey-Videla, 2012). Afterward, the participants reviewed the informed consent forms that include specific instructions, and procedures. The qualitative interviews accommodated the participants' schedule. Before the starting the interview, participants reviewed the informed consent form. Participants asked questions throughout the process and receive answers (James et al., 2016). The final step asked the participants to sign the form at the interview setting prior to starting and returning the signed form to the researcher (Bernard, 2013). The location for the research documents is a locked file drawer in my home office for a period of 5 years.

Participant withdrawal from the process was at the participant's discretion (Plankey-Videla, 2012). The participants could withdraw at any time if they were uncomfortable or for any other reason by face-to-face communication, email, or telephone notification to the researcher. If a participant withdrew, the same level of confidentiality will occur as if the participant completed the process.

Throughout the research study, there were no incentives for the participants (Denzin & Lincoln, 2011). During the initial telephone call describing the study, disclosure of no incentives for participation were conveyed to all participants. Specific details located on the consent form under the Privacy section; conveyed confidentiality

to all participants. The use of the participant's name, business name, or any information identifying the participant in the study reports was prohibited from the research study (Posey et al., 2014).

The collected data remains in a locked filing cabinet in my office for a minimum of five years (Bernard, 2013). The final doctoral manuscript includes the official Walden University IRB control number 05-29-17-0042808. Data security procedures ensure participant's confidentiality remains secure during and after the study (Marshall et al., 2013). After five years, disposition of the study material through a professional disposal service is the choice (Denzin & Lincoln, 2011). The disposition receipt remains secured in the same filing cabinet in a file titled Doctoral Study 2017.

### **Data Collection Instruments**

During the research study, I served as the primary data collection instrument. Yazan (2015) specified the researcher is the primary instrument in a qualitative study that involves collecting valid and reliable data. In conjunction, Granot, Brashear, and Motta (2012) illustrated one of the main factors as researcher being the primary collection instrument is gaining trust and acceptance during the data collection process. The analysis of data is ultimately in the hands of the researcher (Miles, Huberman, & Saldana, 2013).

The data collection process begins with obtaining research data from face-to-face semistructured interviews with participants addressing open-ended questions. Cronin-Gilmore (2012) embraced semistructured interviews as an asset for the researcher to uncover new information by allowing the participants to speak with candor.

Semistructured interview responses provide the participant an opportunity to expound on interview questions (Granot et al., 2012). James et al. (2016) conducted a purposeful qualitative study involving 10 participants that responded to open-ended questions exploring the effect of a coaching-style workforce development intervention.

Prior to the interview, participants reviewed the consent form. The consent form explained the use of the data collected only for the research study and remains confidential. A complete explanation of participation to the participants involved voluntary status along with the rights disclosed and the use of the data collected (Unluer, 2012). Information sheets were used for clarification of how the data collected was used along with a consent form (Hvalic-Touzery et al., 2017). Research studies with clear communication between the researcher and participants may eliminate tensions thus providing confidence for in-depth dialogue (Malterud et al., 2016).

The third data collection instrument was the archival and physical documents consisting of daily log entries, run reports, and training reports. An official request to the fire chief provided a city information release form. Upon completion of the city information release form, the signed form was returned to the fire chief for official access to the requested documents keeping a copy in the secured filing cabinet (Appendix E). A plethora of information was obtained from log entries, run reports, and training reports (Fleming & Zhu, 2009). The proper channels for obtaining documents is with an official information request form (Fleming, 2010). The discovery of lessons learned occur from the analysis of fire department documents (Demiroz & Kapucu, 2012).

Transcript review and member checking ensures the reliability and validity of the data collection instrument process. Upon completion of the interview process, I transcribed the interviews. The reliability and validity of the data collected through the transcription of audio interviews, and member checking enhanced the study (Ali & Yusof, 2011). The use of audio-recorded interview transcripts illustrated in-depth responses from participants. In a study conducted by Pilbeam et al. (2016), the use of audio transcript reviews identified procedures of safety-related events as lessons learned to improve operations.

Upon interpreting the responses from participants, member checking occurred by meeting with the participants individually to share the summary of my interpretations ensuring the responses were valid. Member checking by a researcher may uncover omitted information through transcript review with the participants (Houghton, Casey, Shaw, & Murphy, 2013). Member checking is a process where the researcher and participants discuss the transcripts for accuracy minimizing errors (Goldblatt, Karnieli-Miller, & Neumann, 2011). Member checking is a validation of collected data used to reduce errors and uncover information missed (Marshall & Rossman, 2016). Dissemination of transcripts to the participants in an electronic form with a one week suspense allowed adequate time ensuring accuracy. The reviewed transcripts had a return email address for a safe return to the researcher.

The interview protocol is in Appendix A, interview questions in Appendix B. During each interview, strict compliance of the interview protocol maintained consistency with the interview process (Appendix A). Following interview protocol

during the process is essential to maintain the integrity of the study (Granot et al., 2012). The use of interview protocols ensures each interview is conducted the same for each participant (De Massis & Koltar, 2014). In a study conducted by Torres and Mejia (2017), interview protocols during the selection of virtual employees maintaining the same questions and procedures for each candidate.

I asked the same questions for each participant maintaining consistency (Appendix B). Researchers use the same set of questions for each participant maintains the integrity of the research study (Denzin & Lincoln, 2011). Yin (2013) emphasized interview questions guide the researcher and keep data collection on track. Researchers maintaining a primary set of research questions used for each participant ensures reliability (Rosenthal, 2016).

### **Data Collection Technique**

The interviews took place in an atmosphere without interruptions that included the organization's conference room, private offices, or a neutral location off premises. Yazan (2015) confirmed a quiet setting without interruptions provides a relaxed environment. Granot et al. (2012) suggested interview locations should be in an environment free of distractions and interruptions. The main goal of an interview is to protect the integrity of the study and the anonymity of the participants (Lehmann & Heagy, 2014).

The interviews began with the interview protocol (Appendix A) followed by semistructured questions. Researchers use semistructured questions to acquire a greater understanding of the responses from participants (Marshall & Rossman, 2011). Yazan



(2015) posited semistructured questions allow the researcher to ask follow-up questions to spark new thoughts from participants. Granot et al. (2012) confirmed the in-depth data recovered from semistructured questions contribute to addressing the research problem.

Data collection derived from audio recordings and note taking. I used an Apple iPhone 6Plus, which records voices in high clarity and a backup standard handheld microcassette recorder both for storing raw data along with a hardbound journal taking notes. I transcribed the interviews using Dragon Professional software and secure a signed copy of the consent agreement. During each interview, note taking of non-verbal communication of participants contribute to the data collection process (Cronin-Gilmore, 2012). Vague responses during recordings may warrant clarification to solicit a deeper response (Posey et al., 2014). Rosenthal (2016) concurred the use of electronic digital forms of recording interviews because of the clarity.

The advantages of using semistructured interviews during the data collection process consist of using two recording devices in case one fails the latter captures the interview. Assurance of recorded interviews and confidentiality were included in the participation agreement for the IRB. Researchers may use two separate recording devices that will serve as a fail-safe method of maintaining accurate responses from participants (Cronin-Gilmore, 2012). Tsatsou (2016) theorized the use of multiple data recording devices to prevent information from being lost. Denzin and Lincoln (2011) displayed maintaining audio records along with personal notes, and company records will enhance the analysis of the study by using a methodological triangulation to compare data from different sources. Disadvantages consist of maintaining three

separate records, iPhone 6 Plus recordings, handheld recordings, and researcher notes. Researcher notes may include possible biases, and additional follow-up notes. Having multiple records increases the possibility of lost recordings, documents, or videos (Torres & Mejia, 2017). Retrieval of records may be difficult because of documentation misplacement (Yin, 2013). There is a possibility that recording devices may fail and not record responses from participants (Miles et al., 2013).

Upon completion of interview transcriptions, member checking was accomplished with each participant. Another scheduled meeting with participants reviewed my interpretations of the participant's responses for accuracy. During the member checking meeting, participants reviewed a summarization of each question to ascertain if they agree or disagree to ensure accuracy. Member checking serves a two-fold purpose that (a) may uncover new data and (b) validate the data collected (Marshall & Rossman, 2016). The use of member checking during semistructured interviews may uncover unintentionally omitted information (Houghton et al., 2013). Parry, Rowley, Jones, and Kupiec-Teahan (2012) proclaimed member checking enhances the credibility of research studies by reconvening participants to review the researcher's interpretation that may provide clarification, understanding, and accuracy.

### **Data Organization Technique**

The use of organizational data tracking systems throughout the data collection process included excel spreadsheets, hardbound journals, and recording devices. The choice of hardbound journals served as a repository for personal notes of each participant's interview, and logging work files or records from the company. The

documents for review provided a deeper understanding of the current strategies. The documents included training curriculum, standard operating procedures, and response reports made available with permission of the fire chief. Organizational tracking systems keep order and a chain of custody for research data (Miles, Huberman, & Saldana (2013). Organizational tracking systems protect the participant's anonymity and privacy (Yap & Webber, 2015). Organizing information provides a logical sequence of storing data for later retrieval (Lehmann & Heagy, 2014).

The storage of research data on a secure computer hard drive located in my home office in a locked drawer ensures the security of the research materials. Hard copies of the research data and interview remain secure stored in a fireproof lockbox located in my home office. The requirement for retention of all research data was a minimum period of 5 years before destroying the electronic data and paper materials at a secure location. Tick, Chauvin, Brown, and Haramati (2015) persisted the importance of security regarding participants of research studies. Miles et al. (2013) reinforced the dedicated locked drawer or fireproof lock box in a secured location should be the resting place for all research materials for at least 5 years. Cronin-Gilmore (2012) concluded original interview notes require safeguarding in a secured location that reflects on participant mannerisms, body language, and any pertinent information about the interview.

### **Data Analysis**

The data analysis process selected for the research study was methodological triangulation of interviews. Researchers increase verification of data accuracy by using

multiple sources (Denzin & Lincoln, 2011; Yin, 2015). The objective of methodological triangulation is to use multiple data sources to cross-validate data when two or more sources have similar results, which may uncover new information (Almajali & Dahalin, 2011). Kaczynski, Salmona, and Smith, (2014) affirmed the combination of interviews, work documents, physical, and archival documents enhance research study analysis. Rosenthal (2016) noted researchers use methodological triangulation to form creditable interpretations in-depth interviews. Research studies require a logical and sequential process for the data analysis process of organizing data that may result in a series of steps (Brakewood & Poldrack, 2013).

The first step for data analysis involved reviewing each transcript to ascertain common words and phrases based on the questions. I transcribed the interviews using Dragon Professional software. Yazan (2015) stressed the commonality in phrases to include words during the review of the transcripts. The second step involved specifying groups and further categorize of data. Yin (2015) expounded data categorization may not be a single event. Researchers analyze multiple data sources to solve problems and use data from interviews to formulate further meanings for comparisons of themes. Posey et al. (2014) postulated multiple sources afford the researcher to reveal additional information and meanings.

Data coding was the third step of the data analysis process and required further examination of data from the interviews that included personal notes annotated in hardbound journals. In this step, classification of themes began with coding data based on common words. Upon completion of data coding, emerging patterns were classified.

Once the patterns were classified, the coding step of analysis involved research from the literature review assisting in classifications. The thorough examination of interviews and all related material allows the researcher to code data into themes (Miles et al., 2013). Researchers use coding to organize data using categories that may address the research problem. Rosenthal (2016) argued a key point to coding is for the researchers to identify repeating words and themes using a read, and re-read process of the transcripts.

The fourth step involved reconstructing the explored data. Linking codes, phrases, and emerging patterns using spreadsheets and QSR International's NVivo11 software brings collected data to the forefront (Posey et al., 2014). During the fourth step, monitoring emerging data and reevaluation of the process eliminated any signs of bias. The reduction of bias, involved the use of a reflective journal which allowed recording of potential biases in brackets and concentrating on the participant. Biases can appear with semistructured interviews because the experts in the field of the case study may include their biases (Zavattaro, Daspit, & Adams, 2015). Lincoln and Guba (1985) propounded the use of reflective journals for researchers to use control bias in research studies. Moustakas (1994) fostered bracketing as a tool for researchers to set aside preconceived judgements to analyze the problem for face value.

Data analysis was the fifth step, it involved clarity of the process and data collected. The use of codes and category structure allowed me to provide clarity in my research study. The structure of research studies illustrates clear understanding and may reveal deeper meanings (Posey et al., 2014). Exploring aspects of the collected data may provide new evolving themes that may answer the research question (Denzin & Lincoln,

2011). Raw data and development of themes derive from the use of specific software providing clarity (Yin, 2015).

QSR International's NVivo11 software was the software of choice for the research study because of the range of capabilities relevant to the research study. Data collected from interviews were collated and inserted into NVivo 11 software for organization developing codes and themes. QSR International's NVivo11 software keeps raw data organized, and streamlines the analysis process (Yin, 2013). The use of NVivo as a viable tool organizes large volumes of data efficiently (Rosenthal, 2016). Importing the semistructured interview transcripts into the QSR International NVivo11 software identifies patterns, themes, and key elements of the interviews (Yin, 2015).

The themes that I obtained directly related to the leadership strategy framework of TL. The use of member checking verified accuracy and interpretation of data collected from interviews and methodological triangulation. The challenges of organizing raw data from recordings include observation notes in hardbound journals, archived documents, and the development of codes for common themes (Posey et al., 2014). The use of themes leads into the transformation of a conclusion to possibly answering the research question of the research study (Yazan, 2015). The use of a detailed analysis of the data identifies themes and relationships using Nvivo 11 software coding and categorization. The relevance of coding of participant responses assisted in addressing the research question (The, Reininga, El Mounni, & Eygendaal, 2013).

## **Reliability and Validity**

Reliability and validity solidify all sections of the project. In this section, the use of consistency in data collection and interactions with participants was demonstrated by using protocols. Reliability and validity reinforced the credibility, transferability, and confirmability of the research proposal.

### **Reliability**

Dependability is an integral part of the integrity of research studies (Pitchforth, Wu, & Mengersen, 2014). I performed member checking in a two-fold manner. First, after the transcription was completed, I summarized each interview question by asking the participant if they agree or disagree with my interpretation to ensure accuracy. Secondly, I scheduled a second meeting with participants to review the completed transcripts to improve the accuracy through verification. Member checking is the first step in minimizing errors in research (Miles et al., 2013). Data review increases the accuracy of participant responses (Goldblatt et al., 2011). Andrasik et al. (2014) emphasized the importance of presenting participants with the researcher's interpretations to affirm accuracy.

### **Validity**

Validity was one of the most critical phases of the process. Ensuring the validity throughout the process is essential to the integrity of the study (Pitchforth et al., 2014). Strategies used to address threats to validity will support the validity of raw data in a consistent manner (Lehmann & Heagy, 2014). These strategies include looking for signs of personal bias by the participants, including body language, the tone of voice, and

nervousness (The et al., 2013). In-depth questioning techniques may provide clarity to questions and thus, help to maintain the validity (Cronin-Gilmore, 2012). Content validity ensures the coding of responses by participants is either relevant or not to the research question (The et al., 2013).

Credibility assurance solidified my study. I used member checking by summarizing responses during the interview and scheduling additional meetings with participants to review my interpretations of responses for accuracy. The use of member checking assisted in the assurance of credibility of the research study (Marshall & Rossman, 2016). Before the data analysis phase, participants ensured the accuracy of their responses through a coordinated review of their audio-recorded verbatim transcripts for errors (Mirchandani & Lederer, 2014). Andrasik et al. (2014) signified the accuracy to transcripts contributes to the credibility of the study through participant review.

I used methodological triangulation collating themes, personal notes, and archiving work documents. I compared data collected searching for similarities and new ideas. During methodological triangulation, detailed notes confirmed data collected for completeness. Researchers use the methodological triangulation of sources to provide credibility of the study (Houghton et al., 2013). The data used in methodological triangulation consists of research questions, interview questions, research notes, memos, job documents of the participants, and the literature review is essential in maintaining the integrity of the study (Denzin & Lincoln, 2011). The researcher uses information



from the collation of data sources of to extract common and new information that may close gaps in the research (Miles et al., 2013).

Transferability was an important part of the research study in which future researchers can expound. The transferability of data contained in the research study produced the same results over time because of the commonalities in thought processes of the next wave of researchers. A complete detail of the research focus includes assumptions allowing future researchers to ascertain if the results of the research study are transferrable. Thick and rich descriptions conveyed by Houghton et al. (2013) include the origin of the context, and data examples assist researchers form individual interpretations. Marshall and Rossman (2016) illustrated that transferability assists the reader capturing the meaning of the research and provides the basis of further studies. Research data results change as data as transferred to the next generation of researchers (Palmiotto, 2012).

Confirmability is the neutrality of the data findings based on the participants and not the researcher's bias (Lincoln & Guba, 1985). During the research study, I used a reflective journal to convey my preconceived thoughts, and assumptions identified in brackets. The reflective journal kept me focused on the emerging research data to ensure that research findings emerge from participants only. Confirmation of data is a tool for the resolution of contradictory data that may convolute the study (Bernard, 2013). Confirmation and verification process is necessary from the beginning stages of data collection throughout the final product, thus maintaining continuity (Marshall & Rossman, 2016).

Data saturation in research studies occurs when new data ceases, and the data of new participant's repeats (Bernard, 2013). Data saturation assurance was maintained through conducting interviews with participants that meet the research study criteria until responses and themes repeat with no new data. New data ceases to unfold with no new themes is an indication the researcher achieved saturation (Fusch & Ness, 2015). O'Reilly and Parker (2013) illustrated that a process of continuation of interviews must happen to accomplish research data saturation.

### **Transition and Summary**

In Section 2, a full illustration of the concentration of the research purpose, the role the research played, and the selection criterion for participants defined in a logical process of the research study. This section contains an in-depth roadmap of the course of action needed to collect data and perform data analysis. The described methods and approaches ensured the reliability and validity throughout the phases of the research study. The use of triangulation maintained the integrity of the research study for progression to Section 3.

Section 3 is a presentation of the research findings consisting of themes deriving from qualitative interviews. The basis for recommendations and application to professional practices are the findings of the research study. Along with application to professional practice, an illustration of how the findings may influence social change by providing improved leadership strategies for businesses. Recommendations for action identified who should focus on the results and what areas need further study to improve

business practices. Finally, reflection of the researcher's experiences included final thoughts of conducting the research.

### Section 3: Application to Professional Practice and Implications for Change

Fire departments in the United States accounted for 31% of municipal budgets with increases of 85% spending between 2015 and 2016 (McFarland & Pagano, 2016). This single case study included 10 fire officers who manage hazardous operations in central Wisconsin. The conceptual framework that I used in this study was TLT. The data collection process included open-ended questions in semistructured, review of fire department staffing documents, and personal journal notes.

I used methodological triangulation in the data analysis process for verification and accuracy through member checking. Three themes evolved that support fire officer leadership strategies for cost management. The fire officers participating in the study determined servant leadership, partnership, accountability, and creative staffing as the most important themes regarding leadership strategies for managing cost of their fire department. The findings of this study may provide valuable information for fire officers in central Wisconsin. Moreover, the findings of this study have implications for innovative leadership strategies and application that may help fire officers promote positive social change through saving lives of firefighters and the citizens they serve.

The purpose of this qualitative single case study was to explore fire officer leadership strategies needed for cost management. During data collection, I focused on exploring the leadership strategies that fire officers use to manage costs associated with hazardous operations. Therefore, I used five semistructured interview questions that were based on leadership strategies and cost management.

The sampling method that I used during data collection was purposive. I selected fire officers because of their specific experience associated with leadership strategies and cost management (Rosenthal, 2016). I used purposive sampling to invite each participant to share various experiences during semistructured interviews. The findings during the data collection phase consisted of participants giving examples of the leadership strategies used for cost management within their firehouse. Furthermore, participants adjusted daily operations to meet budgetary constraints conveyed by fire department leadership. The fire department used creative staffing strategy that specified the minimum staffing per day of 85 that involved a cost savings. Seventy percent of the participants described how creative staffing works, allowing personnel to furlough when staffing is full and allowing personnel who furloughed to work back days furloughed at the end of the year when staffing was needed.

In conjunction with the semistructured interviews, I explored other types of data from the fire department personnel staffing plans, annual reports, and personal journal notes. During the analysis portion of the study, I used methodological triangulation of all collected data, and three themes emerged from the research. The fire department

participating in this study continually strives to update and change cost management strategies to meet budgetary objectives set forth by the city in which they serve supported by working closely with the city finance department, thus maintaining positive operating budget.

### **Presentation of the Findings**

The overarching research question was: What leadership strategies do fire officers use to manage costs associated with hazardous operations? I focused on key themes from the interviews to compare with the literature in the literature review and the established conceptual framework for addressing the research question. The following themes evolved from participant interviews, fire department staffing documents, and personal journal notes to include: (a) servant leadership, (b) partnerships and accountability, and (c) creative staffing.

#### **Theme 1: Servant Leadership**

The first theme offered during participant interviews emphasized the concept of servant leadership. Eighty percent of the participants conveyed the concept of putting others needs ahead of their own produces increased rewards long term. For example, the fire officer viewing the world with an open mind and willingness to work with others will better serve the community (FDO7). The participants of this study concurred that serving others first creates a sense of trust for both fire department personnel and the community (FDO1, FDO2, FDO3, FDO6, FDO7, FDO8, FDO9, FDO10).

Fire officers are trained as world renowned incident commanders but lack business management skills (Fleming, 2010). Fire officers must perform in the same

manner as business leaders, developing creative ways to meet budgetary objectives and sustain operational performance (Zashkiani et al., 2011). Hsiao, Lee, and Chen (2015) concurred that servant leadership incorporates stewardship for the leader to develop efficiencies of processes thus providing a cost savings. Knowing the bottom line first is imperative for cost management for the servant leader to prioritize items needed and maintain fiscal responsibility (FDO1, FDO10). The strategy of being a good listener creates an environment where people work at a higher potential in an autonomous environment (FDO8).

Servant leadership behaviors work in unison with TL as leaders put others first and lead by example (Smith et al., 2016). FDO5 described observing past leaders, and applying bits and pieces of their success provides new ideas. FDO10 posited the contemplation of strategies for efficiently accomplishing projects. Leading by example and putting the emphasis on others is an important leadership strategy that renders positive end results (FDO3). In addition, FDO6 asserted that one key to servant leadership is to look at the big picture and prioritizing benefits versus risks

Based on the findings from this study, I confirmed that servant leadership is a strategy for higher performance; and as suggested by Chiniara and Bentein (2014) a way of life to serve first and the aspiration to lead. Eighty percent of the fire officers participating in this study conveyed their applications of servant leadership in daily operations. For example, servant leadership involves a trickle-down effect originating from the top leadership echelon ending with front-line personnel focusing on behaviors conducive to quality and service (Ling, Lin, & Wu, 2016). Empowering and developing

people is the key to success accomplished by providing the tools to do the job, coaching employees, and granting autonomy (Birasnav, 2014). Furthermore, Hsiao et al. (2015) expressed empowerment, and developing people as a characteristic of servant leadership. The findings of this study provide additional knowledge on the topics discussed in the literature review with the addition of new studies after completing the proposal.

### **Theme 2: Partnerships and Accountability**

The second theme displayed the participants' experience with partnerships and accountability. One hundred percent of the participants indicated use of committees and group strategies to solve problems. As an example, labor and management committees meet to explore different initiatives for further improvement resulting in a give and take situation (FDO3).

The committee concept conveyed by 100% of the participants' as a vital part of the continual partnership with the leadership of the fire department. A clear illustration of partnership with the city finance manager conveyed the success of cost management efforts of the fire department leadership. Participants indicated the inclusion of fire department personnel into committees and partnership groups provides a sense of ownership in the operation increasing morale. Moreover, the participants conveyed the importance of partnerships as a team attitude, meet as a leadership team, and discussing the costs with operational response teams.

Participants revealed the experience for accountability for both personal and organizational situations. Moreover, participants expressed the importance of cost



management by order reduction of supplies already in stock, and maintaining the current stock in an inventory system. Marsh (2013) conveyed that rules hold a higher standard of accountability but cannot measure people's integrity to follow rules. Another accountability example expressed was the value of importance of fire protection services and the impact on the community. Temporado (2012) noted that fire service leaders are held accountable at every level for all functions of the fire department. FDO10 posited cities that do not value fire protection services provide reduced services to their citizens as opposed to cities valuing fire protection services prosper.

Outcome based budgeting emerged as part of the partnership and strategy theme. Sixty percent of the participants described outcome based budgeting as a strategy of fiscal accountability projected to be the key to the future and success of the fire department. Ghysels and Ozkan (2015) affirmed that analyzing trends of previous expenditures provide a basis or predicting outcomes in the future. The participants noted the key to outcome based budgeting is to forecast the possibility of various events that may occur and to plan five to ten years ahead. Participants explained accountability as prioritizing the fire department's needs based on participatory management with the four Asst. Chiefs working together on a regular basis bouncing ideas off each other seems to be effective.

The findings from my study confirm partnerships and accountability as a key component in cost management (Anzia & Moe, 2015). Additionally, fire officers manage assigned functional divisions of the fire department and act as the steering arm for partnerships, holding accountability for personnel assigned (Light, 2016). The

progress of cost management is a challenge from every level of personnel working in unison for the common good of the fire department (Fleming & Zhu, 2009). The atmosphere in the fire service is changed from past years placing greater emphasis on accountability because of fiscal issues within jurisdictions (Wilson & Grammich, 2015). Successful cost management derives from strategies including partnerships from all parties, and accountability to manage the processes (Taylor, Tharapos, & Sidaway, 2014). The findings of this study on the topics discussed in the literature review with the addition of new studies after completing the proposal.

### **Theme 3: Creative Staffing**

The third emerging theme emphasized the participants' experience with creative staffing. Seventy percent of the participants identified creative staffing as one of the most innovative cost management measures since the 1990s. FDO9 described the creative staffing program as a viable program that meets the needs of staffing and controls the cost of personnel. Creative staffing essentially includes a design to assign extra personnel every day to accommodate anyone arriving for work sick thus having a buffer as described by 70% of the participants. Upon conclusion of roll call, if there were no call offs communication was sent through the fire department public address system asking for volunteers to furlough. The remaining 30% of participants focused on partnerships and accountability.

Seventy percent of participants revealed the long-term effects of the creative staffing rely on continuous monitoring. The future consideration consisted of long-term, six months to one year out, identifying shortfalls, and overstaffing issues, assists fire

department leadership with future hiring. Later in the year when a staffing shortage exists, personnel that furloughed earlier in the year can work back the furloughed time maintaining an effective cost management model. The creative staffing system management creates a fair and equitable environment for both rank in file employees and the leadership staff.

Creative staffing is essential for cost management controlling the effects of overtime. Personnel costs are the bulk of fire department budgets consisting of salaries, benefits, pensions, and overtime. The creative staffing model provides flexibility for fire officers to reduce overtime costs and later in the year staff for shortages benefiting employees and the bottom line. Fire department leadership partnering with labor adds to the validity and success of the program.

The findings from this study support the creative staffing model as a viable cost management strategy (Fleming & Zhu, 2009). Cost savings in one area of a fire department budget may allow reallocation of funds to critical line items (Hubrich & Tetlow, 2015). Leadership strategies have a profound effect on the success of creative staffing primarily with TL leading by example (Antonakis & House, 2014). The creative staffing strategy serves a two-fold process beginning with cost savings, and illustrating fiscal responsibility to municipality leadership (Light, 2016).

### **Conceptual Framework**

The established themes from this study, which included the participant interviews, fire department staffing documents, and my personal journal notes connects the findings of the conceptual framework. TLT constitutes the conceptual framework for

this study. Eighty percent of the fire officers that participated in this study practiced TLT through leading by example using the servant leadership strategy. TLT emphasizes collective vision while maintaining earned trust from employees (Caillier, 2014). Furthermore, TLT affirms leaders act as role models increasing employee motivation in a collective manner to reach the goals of the organization (Schaubroeck et al., 2016). One hundred percent of the fire officers in this study practice TLT in some form daily as 80% specifically mentioned leading by example and putting others first (Antonakis & House, 2014; Chiniara & Bentein, 2017; Hsiao et al., 2015; McClesky, 2014).

Partnerships and accountability fit into the conceptual framework of this study through TLT using positive leadership strategies, integrity, and the trust of employees (Torres & Bligh, 2012). One hundred percent of the fire officers in this study developed partnerships with supporting city divisions, and with the labor union representing the workforce providing positive forward movement. Anzia and Moe (2014) postulated partnerships assist in positive directions of organizations promoting new ideas from all levels of an organization. Moreover, leaders practicing TLT increase respect, trust, and integrity from employees coming together with the same objectives and goals of the organization (Deinert et al., 2015).

Creative staffing fit into the conceptual framework of this study using servant leadership strategy, TLT, and cost management (Fleming & Zhu, 2009). Creative staffing promotes positive partnerships with both city leadership, and the labor union through cost management measures (Caillier, 2014). Trussel and Patrick (2013) postulated positive cost management promotes fiscal integrity for leaders as future

requests for additional funding may be warranted. Eighty percent of the fire officers in this study lead by example as their concurrence on business related matters is communicated to the assigned workforce. Deichmann and Stam (2015) affirmed that leaders strongly identifying with an organization motivate followers to meet the goals of the organization. Success can be measured through TLT strategies encouraging cooperation between the leader and employees (Birasnav, 2014; Yucel et al., 2014).

### **Business Practice**

The themes from this study link the peer-reviewed literature to the business practice. Cost management is a vital part of survival for public safety organizations (Anzia & Moe, 2014). Ruetzler et al. (2014) posited safety related services are the first to get cut in distressed times. The creative staffing strategy affirms the financial stability of the fire department thus reducing the possibility of cuts. Unforeseen situations arise daily impacting operational budgets (Kasdan, 2015). Seventy percent of the fire officers in this study revealed their flexibility to render daily operational staffing decisions and operate within the budget.

The partnering and accountability theme link the literature review with the findings of this study relating to working in groups, committees, and developing partnerships within city administration. Partnerships are vital to business relationships when managing costs related to operations (Taylor et al., 2014). Accountability of costs involve all parties involved and must be managed through efficient leadership strategies (Torres & Bligh, 2012). Van der Voet (2013) operational management related to a business perspective provides efficiency in service and is accomplished through

effective leadership strategies. One hundred percent of the fire officers in this study affirmed working as partners brings people together and increases accountability. FDO2 illustrated the importance of working with committees as personnel volunteer their time and expertise to provide viable plans for purchases. FDO7 conveyed working with outside organizations in groups opens doors for additional innovative ideas and possible group purchases.

Creative staffing links the literature review with the findings of this study by addressing leadership strategies and cost management. In the fire service, there is operational uncertainty every day not knowing the financial impact of the next call (Sienkiewicz-Malyjurek, 2016). In this research study, creative staffing reduced costs of overtime and provides a work back option to cover open positions when needed. FDO3 postulated staffing levels are decided by the contract along with the leadership team and strategized in weekly management meetings. FDO9 illustrated the creative staffing strategy forces leadership to look long term to forecast shortfalls to adjust staffing and assist with planning for the hiring model. Creative staffing is used to reduce personnel cost for daily staffing by offering furlough time (FDO4). Cost management is paramount to the success of fire departments, as the fire officer needs strategies to accomplish this task (Smith et al., 2016). Operational effectiveness consists of leaders developing innovative strategies to overcome unforeseen events that impact the budget (Zashkiani et al., 2011).

### **Applications to Professional Practice**

The findings of this study illustrate a focus on fire department business practices using various leadership strategies which contributes to the overall financial success of the organization (Kasdan, 2015). The identified themes from this study include (a) servant leadership, (b) partnerships and accountability, and (c) creative staffing that applies to positive solutions of fire department business practices. The significance of this study is in the findings that suggest innovative business practices contributing to effective leadership strategies and cost management for the fire service (McCleskey, 2014).

The findings from this study also added to the body of knowledge indicated by 80% of the participants that servant leadership is effective for fire officers putting others first while at the same time leading by example and achieving the goals of the fire department (Schaubroek et al., 2016). Furthermore, the study added to the body of knowledge identifying creative staffing, partnerships and accountability throughout the fire department business practices having a profound effect resulting from servant leadership (Smith et al., 2016). The findings of this study indicated fire officers must distinguish between the most appropriate action for any given situation to achieve the fire department goals and objectives (Van der Voet, 2013). FDO9 posited the study fire department practices putting service ahead of everything by measuring what is needed to serve the community. FDO8 described efficiency within the fire department begins with the fire officers providing service to the fire department staff they lead through leading

by example. Serving others through high quality of care and operating within the budget is the key to efficiency (FDO7).

### **Implications for Social Change**

The implications of a positive social change from this study consist of fire officer leadership strategies for cost management. Fire officers realized that business conditions shape the success of the fire department (Kasdan, 2015). In the analysis of the findings from this study, fire officers attempted to link leadership strategies to meet the organization's mission and vision while managing fire department costs (Anzia & Moe, 2014).

Indications from this study reflect the positive effect servant leadership, partnerships and accountability along with creative staffing have on the overall fire department business outcomes (Yucel et al., 2014). The findings and methodological triangulation of data from this study indicated that both the fire department leadership and rank in file personnel working collectively toward common goals create a successful business environment (Hibbert & Cunliffe, 2015). FDO2 noted working collectively with the labor management committees from the labor union was the key partnerships and success. FDO3 conveyed that working in partnerships and committees sometimes develops new points of view that change the direction of the situation in a positive direction. The social improvements from this qualitative single case study encourages strong partnerships working in unison to improve services to the people living within the jurisdiction served. The confirmation of participants illustrated the importance of servant leadership, partnerships, accountability, and creative staffing (FDO1, FDO2, FDO3,



FDO4, FDO5, FDO6, FDO7, FDO8, FDO9, and FDO10). Moreover, the social benefits of these strategies increase value to the fire department services to citizens served by saving lives and property which benefits the overall community (Santos, 2012).

### **Recommendations for Action**

The goals of this study were to explore the leadership strategies fire officers use to manage costs. The fire officer manages the fire department in a similar manner as a business leader developing innovative leadership strategies to manage costs (Ayala & Manzano, 2014). Moreover, Nollenberger et al. (2012) confirmed proper management of costs within an organization is paramount to achieving trust, integrity, and community support. FDO6 argued using strategies to prioritize purchases ensures the best interest of the public and the fire department's operating budget. Furthermore, FDO3 tendered there are times when fire officers may have to use innovative strategies to achieve mission goals and continue to operate within the budget.

The results of this study support leadership strategies fire officers use to manage costs is vital to the success of the community and the organization. Moreover, contained in the findings, the participants confirmed a lack of business knowledge exists within the fire service in general (FDO7, FDO9, and FDO10). These findings, therefore, support the following recommendation to offer business courses for fire officers of all ranks as part of fire department training to increase performance managing costs within their fire station.

### **Recommendations for Further Research**

The future recommendation for research may assist in the improvement of leadership strategies for cost management in fire departments. The theme data collected from this study include personnel staffing plans, annual reports, and personal journal notes that illustrate effective strategies supported by annual financial reports can extend for future research. Furthermore, future fire department researchers should consider continuing the exploration of leadership strategies used for cost management (Denzin & Lincoln, 2011; Marshall & Rossman, 2016).

The limitations of this study included semistructured interviews with fire officers with the appropriate experience and the inability to recall situations pertinent to the study (James et al., 2016; Rosenthal, 2016). The fire officers in this study managed functional areas of the fire department with separate budget line items but may not be familiar with other functional area's budgets. Yazan (2015) argued participants and discovered data restrictions constitutes limitations. Moreover, limitations of Research studies may involve some degree of subjectivity and are not free of total objectivity (Parry et al., 2014). Marshall and Rossman (2016) contended the subjectivity of researchers may be based on traditions and experiences of the topic of study.

The chosen fire officers met specific eligibility criteria to participate in the study which, consisted of having successfully managed hazardous operations for 5 years in a single fire department. The identification of limitations for the future research with fire officers' perspectives, interpretations, and different experiences present a challenging outlook as preconceived notions lacking objectivity may arise (Yin, 2009).

### **Reflections**

The purpose of this research was to explore fire officer leadership strategies for cost management. The possibility of preconceived notions exists with researchers in the progression of each study. Prior to conducting data collection, I wrote my perceptions of the progression and secured them in a sealed envelope. After completing my analysis, I opened the envelope and reviewed the contents only to find a different outcome than the one I expected demonstrated that as a researcher I was open to all possibilities.

As the researcher, the entire picture was not clear because of events and process that evolved during the semistructured interviews. During the DBA process, patience and determination were vital however, the results were remarkable. I expected some resistance and lack of business acumen to the interview questions. The interview process was interesting, informative, and different from my beginning expectations. The fire officers were professional, knowledgeable, and innovative. The results of the findings for this study supported the peer-reviewed articles of the literature review.

### **Summary and Study Conclusions**

In the future, municipal budgets may involve reductions at every level requiring fire officers to develop innovative leadership strategies for managing costs to remain cost effective (Van der Voet, 2013). The purpose of this qualitative single case study was to explore fire officer leadership strategies for cost management. Fire officers encounter daily challenges of managing hazardous operations while required to operate within budgetary constraints (Fleming, 2010; Fleming & Zhu, 2009; Smith et al., 2016).

Fire officers use TL to address daily challenges with leadership strategies in accomplishing the goals of the fire department (Birasnav, 2014; Fleming & Zhu, 2009). McClesky (2014) concurred that TL illustrates leading by example motivates followers to emulate the leader. The findings of this study indicated that fire officers must select the appropriate leadership strategy for achieving the goals of the fire department and manage costs (Anzia & Moe, 2014). Fire officers in this study used the creative staffing strategy to manage personnel cost which in turn provided cost savings to the annual operating budget. Servant leadership strategy is used daily putting others first forcing the fire officers to lead by example with staff following thus achieving the goals of the fire department.

The results of study findings indicated fire officers use innovative methods such as servant leadership, creative staffing, partnerships and committees to meet organizational objectives creating increased accountability among city leaders (Anzia & Moe, 2014; Chiniara & Bentein, 2017; Hsiao et al., 2015). FDO4 contended partnerships with labor union members solicits innovative ideas from front line personnel. FDO2 affirmed the importance of partnerships with all ranks in the fire department develops accountability and ownership in the organization. Fire officers in junior ranks have a challenge to follow their superiors by emulating their decision making and obtaining higher education in business management to achieve organizational goals (Caillier, 2014; Nutt, 2014). Furthermore, fire officers face leadership strategy challenges in the future associated with the demands of the city leaders and citizens (Sienkiewicz-Malyjurek, 2016).

## References

- Ahmedshareef, Z., Petridis, M., & Hughes, R. T. (2014). The affordances of mixed method in software project management research. *International Journal of Multiple Research Approaches*, 8(2), 201-220.  
doi:10.1080/18340806.2014.11082061
- Alamdar, F., Kalantari, M., & Rajabifard, A. (2016). Towards multi-agency sensor information integration for disaster management. *Computers, Environment, and Urban Systems*, 56, 68-85. doi:10.1016/j.compenvurbsys.2015.11.005
- Almakenzi, S., Bramantoro, A., & Rashideh, W. (2015). A survivability model for Saudi ITC start-ups. *International Journal of Computer Science & Information Technology*, 7, 145-157. doi:10.5121/ijcsit.2015.7213
- Ali, A., & Yusof, H. (2011). Quality in qualitative studies: The case of validity, reliability, and generalizability. *Issues in Social and Environmental Accounting*, 5, 25-64. Retrieved from <http://isea.icseard.uns.ac.id/>
- Ali, N. M., Jangga, R., Ismail, M., Kamal, S. N. I. M., & Ali, M. N. (2015). Influence of leadership styles in creating quality work culture. *Procedia Economics and Finance*, 31, 161-169. doi:10.1016/S2212-5671(15)01143-0
- Almajali, D. A., & Dahalin, Z. M. (2011). Applying the triangulation approach in IT - business strategic alignment and improvable competitive advantage. *IBIMA Business Review*, 1(2011), 1-13. doi:10.5171/2011.214481

- Andrasik, M. P., Chandler, C., Powell, B., Humes, D., Wakefield, S., Kripke, K., & Eckstein, D. (2014). Bridging the divide: HIV prevention research and black men who have sex with men. *American Journal of Public Health, 104*, 708-714. doi:10.2105/AJPH.2013.301653
- Antonakis, J., & House, R. J. (2014). Instrumental leadership: Measurement and extension of transformational–transactional leadership theory. *The Leadership Quarterly, 18*, 746-771. doi:10.1016/j.leaqua.2014.04.005
- Anzia, S. F., & Moe, T. M. (2014). Public sector unions and the costs of government. *The Journal of Politics, 77*, 114-127. doi:10.1086/678311
- Arasti, M., Khaleghi, M., & Noori, J. (2016). Corporate-level technology strategy and its linkage with corporate strategy in multi-business companies: IKCO case study. *Technological Forecasting and Social Change, 1(1)*, 1-10. doi:10.1016/j.techfore.2016.02.013
- Artinger, F., Petersen, M., Gigerenzer, G., & Weibler, J. (2015). Heuristics as adaptive decision strategies in management. *Journal of Organizational Behavior, 36(S1)*, S33-S52. doi:10.1002/job.1950
- Ayala, J. C., & Manzano, G. (2014). The resilience of the entrepreneur. Influence on the success of the business: A longitudinal analysis. *Journal of Economic Psychology, 42*, 126-135. doi:10.1016/j.joep.2014.02.004
- Bamberger, M., Tarsilla, M., & Hesse-Biber, S. (2016). Why so many ‘rigorous’ evaluations fail to identify unintended consequences of development programs: How mixed methods can contribute. *Evaluation and Program Planning, 55*, 155-

162. doi:10.1016/j.evalprogplan.2015.01.001

- Banks, G. C., McCauley, K. D., Gardner, W. L., & Guler, C. E. (2016). A meta-analytic review of authentic and transformational leadership: A test for redundancy. *The Leadership Quarterly*, 27(1), 1-19. doi:10.1016/j.leaqua.2016.02.006
- Barnett, J. L., Sheckells, C. L., Peterson, S., & Tydings, E. M. (2014, December). 2012 *Census of Governments: Finance—state and local government report*. U.S. Census Bureau, Economy-Wide Statistics Briefs: Public Sector. Retrieved from [http://www2.census.gov/govs/local/summary\\_report.pdf](http://www2.census.gov/govs/local/summary_report.pdf)
- Baskarada, S. (2014). Qualitative case study guidelines. *The Qualitative Report*, 19(40), 1-25. Retrieved from <http://ssrn.com/abstract=2559424>
- Bergamaschi, M., & Randerson, K. (2016). The futures of family businesses and the development of corporate social responsibility. *Futures*, 75(1), 54-65. doi:10.1016/j.futures.2015.10.006
- Bernard, H. R. (2013). *Social research methods: Qualitative and quantitative approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Bhakta Bhandari, R. (2014). Social capital in disaster risk management; A case study of social capital mobilization following the 1934 Kathmandu valley earthquake in Nepal. *Disaster Prevention and Management*, 23, 314–328. Retrieved from <http://www.emeraldinsight.com/loi/dpm>
- Birasnav, M. (2014). Knowledge management and organizational performance in the service industry: The role of transformational leadership beyond the effects of

transactional leadership. *Journal of Business Research*, 67, 1622-1629.

doi:10.1016/j.jbusres.2013.09.006

Borghesi, A., & Gaudenzi, B. (2012). *Risk management: How to assess, transfer, and communicate critical risks* (Vol. 5). Milan, Italy: Springer Science & Business Media.

Brakewood, B., & Poldrack, R. A. (2013). The ethics of secondary data analysis:

Considering the application of Belmont principles to the sharing of neuroimaging data. *Neuroimage*, 82, 671-676. doi:10.1016/j.neuroimage.2013.02.040

Caillier, J. G. (2014). Toward a better understanding of the relationship between transformational leadership, public service motivation, mission valence, and employee performance: A preliminary study. *Public Personnel Management*, 43, 218-239. doi:10.1177/0091026014528478

Chalfant, B. A., & Comfort, L. K. (2016). Dynamic decision support for managing regional resources: mapping risk in Allegheny county, Pennsylvania. *Safety Science*, 90, 97-106. doi: 10.1016/j.ssci.2015.09.013

Chambers, N., Sheaff, R., Mahon, A., Byng, R., Mannion, R., Charles, N., . . . & Llewellyn, S. (2013). The practice of commissioning healthcare from a private provider: Learning from an in-depth case study. *BMC Health Services Research*, 13, S4. doi:10.1186/1472-6963-13-S1-S4

Cetin, M. O., & Kinik, F. S. F. (2015). An analysis of academic leadership behavior from the perspective of transformational leadership. *Procedia-Social and Behavioral Sciences*, 207, 519-527. doi:10.1016/j.sbspro.2015.10.122



- Chen, A. S. Y., & Hou, Y. H. (2016). The effects of ethical leadership, voice behavior, and climates for innovation on creativity: A moderated mediation examination. *The Leadership Quarterly*, 27(1), 1-13. doi:10.1016/j.leaqua.2015.10.007
- Chen, S., Zhang, G., Zhang, A., & Xu, J. (2015). Collectivism-oriented human resource management and innovation performance: An examination of team reflexivity and team psychological safety. *Journal of Management & Organization*, 1-14. doi:10.1017/jmo.2015.50
- Chiniara, M., & Bentein, K. (2017). The servant leadership advantage: When perceiving low differentiation in leader-member relationship quality influences team cohesion, team task performance and service OCB. *The Leadership Quarterly*. doi:10.1016/j.leaqua.2017.05.002
- Chittaro, L., & Buttussi, F. (2015). Assessing knowledge retention of an immersive serious game vs. a traditional education method in aviation safety. *IEEE Transactions on Visualization and Computer Graphics*, 21, 529-538. doi:10.1016/j.ssci.2013.09.013
- Cicala, J. E., Bush, A. J., Sherrell, D. L., & Deitz, G. D. (2014). Does transparency influence the ethical behavior of salespeople? *Journal of Business Research*, 67, 1787-1795. doi:10.1016/j.jbusres.2013.12.011
- Clarke, S. (2013). Safety leadership: A meta-analytic review of transformational and transactional leadership styles as antecedents of safety behaviors. *Journal of Occupational and Organizational Psychology*, 86(1), 22-49. doi:10.1111/j.2044-8325.2012.02064.x

- Cohen-Hatton, S. R., Butler, P. C., & Honey, R. C. (2015). An investigation of operational decision making in situational incident command in the UK fire and rescue service. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *57*, 793-804. doi:10.1177/0018720815578266
- Conchie, S. M., Moon, S., & Duncan, M. (2013). Supervisor's engagement in safety leadership: Factors that help and hinder. *Safety Science*, *51*, 109-117. doi:10.1016/j.ssci.2012.05.020
- Cooper, D. (2015). Effective safety leadership: Understanding types & styles that improve safety performance. *Professional Safety*, *60*(2), 49-53. Retrieved from <http://www.asse.org>
- Cronin-Gilmore, J. (2012). Exploring marketing strategies in small businesses. *Journal of Marketing Development and Competitiveness*, *6*(1), 96-107. Retrieved from <http://www.na-businesspress.com/jmdcopen.html>
- Daniel, J. (2012). *Sampling essentials: Practical guidelines for making sampling choices*, Thousand Oaks, CA: Sage Publications.
- Daniel, L. (2015). Safety leadership defined within the Australian construction industry. *Construction Economics and Building*, *15*(4), 1-15. doi:10.5130/AJCEB.v15i4.4572
- Deichmann, D., & Stam, D. (2015). Leveraging transformational and transactional leadership to cultivate the generation of organization-focused ideas. *The Leadership Quarterly*, *26*, 204-219. doi:10.1016/j.leaqua.2014.10.004
- Deinert, A., Homan, A. C., Boer, D., Voelpel, S. C., & Gutermann, D. (2015).

Transformational leadership sub-dimensions and their link to leaders' personality and performance. *The Leadership Quarterly*, 26, 1095-1120.

doi:10.1016/j.leaqua.2015.08.001

De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy*, 5(1), 15-29. doi:10.1016/j.jfbs.2014.01.007

Demiroz, F., & Kapucu, N. (2012). The role of leadership in managing emergencies and disasters. *European Journal of Economic and Political Studies*, 5, 91-101.

Retrieved from <http://ejeps.fatih.edu.tr/>

Denzin, N. K., & Lincoln, Y. S. (2011). *The Sage handbook of qualitative research* (4th ed.). Thousand Oaks, CA: Sage Publications.

Dillard, J., & Layzell, D. (2014, September). An ongoing journey of corporate social responsibility. *Accounting Forum*, 38, 212-226.

doi:10.1016/j.leaqua.2015.02.007

Eubanks, D. L., Brown, A. D., & Ybema, S. (2012). Leadership, identity, and ethics. *Journal of Business Ethics*, 107, 1-3. doi:10.1007/s10551-012-1295-5

Fattahi, M., Mahootchi, M., Govindan, K., & Hussein, S. M. M. (2015). Dynamic supply chain network design with capacity planning and multi-period pricing.

*Transportation Research Part E: Logistics and Transportation Review*, 81, 169-202. doi:10.1016/j.tre.2015.06.007

Fernandez, C. S., Noble, C. C., Jensen, E., & Steffen, D. (2015). Moving the needle: A retrospective pre-and post-analysis of improving perceived abilities across 20

- leadership strategies. *Maternal and Child Health Journal*, 19, 343-352.  
doi:10.1007/s10995-014-1573-1
- Fleming, R. S. (2010). Balancing the evolving roles of the fire service executive. *Business Renaissance Quarterly*, 5, 133-142. Retrieved from <http://www.brqjournal.com>
- Fleming, R. S., & Zhu, F. X. (2009). Managerial responsibilities of the contemporary fire chief. *Journal of Global Business Issues*, 3(2), 57. Retrieved from <http://www.jgbi.org>
- Flick, U. (2014). *The Sage handbook of qualitative data analysis*. Thousand Oaks, CA: Sage Publications. doi:10.4135/9781446282243
- Fusch, P., & Ness, L. (2015). Are we there yet? Data saturation in qualitative research. *Qualitative Report*, 20, 1408-1416. Retrieved from <http://tqr.nova.edu/>
- Geisler, E. (2014). Measuring the contributions of knowledge management systems to the strategic competitiveness of organizations: A review and a model. *International Journal of Innovation Technology Management*, 07(2), 89-107. doi:10.1142/s0219877010001854
- Ghysels, E., & Ozkan, N. (2015). Real-time forecasting of the US federal government budget: A simple mixed frequency data regression approach. *International Journal of Forecasting*, 31, 1009-1020. doi:10.1016/j.iforecast.2014.12.008
- Gillen, D., & Morrison, W. G. (2015). Aviation security: Costing, pricing, finance, and performance. *Journal of Air Transport Management*, 48, 1-12.  
doi:10.1016/j.jairtraman.2014.12.005

- Goldblatt, H., Karnieli-Miller, O., & Neumann, M. (2011). Sharing qualitative research findings with participants: Study experiences of methodological and ethical dilemmas. *Patient Education and Counseling*, 82, 389-395.  
doi:10.1016/j.pec.2010.12.016
- Granot, E., Brashear, T. G., & Motta, P. C. (2012). A structural guide to in-depth interviewing in business and industrial marketing research. *Journal of Business & Industrial Marketing*, 27, 547-553. doi:10.1108/08858621211257310
- Guo, X., & Kapucu, N. (2015). Network performance assessment for collaborative disaster response. *Disaster Prevention and Management*, 24, 201-220.  
doi:10.1108/DPM-10-2014-0209
- Hajmohammad, S., & Vachon, S. (2014). Safety culture: A catalyst for sustainable development. *Journal of Business Ethics*, 123, 263-281. doi:10.1007/s10551-013-1813
- Hardy, K., & Comfort, L. K. (2015). Dynamic decision processes in complex, high-risk operations: The Yarnell Hill fire, June 30, 2013. *Safety Science*, 71, 39-47.  
doi:10.1016/j.ssci.2015.04.019
- Hawe, G. I., Coates, G., Wilson, D. T., & Crouch, R. S. (2012). Agent based simulation for large-scale emergency response: A survey of usage and implementation. *ACM Computing Surveys*, 45(1), 1-51. doi:10.1145/2379776.2379784
- Helyer, R., & Lee, D. (2012). The twenty-first century multiple generation workforce. *Education & Training*, 54, 565-578. doi:10.1108/00400911211265611
- Hibbert, P., & Cunliffe, A. (2015). Responsible management: Engaging moral reflexive

practice through threshold concepts. *Journal of Business Ethics*, 127, 177-188.

doi:10.1007/s10551-013-1993-7

Hogan, J., & Foster, J. (2013). Multifaceted personality predictors of workplace safety performance: More than conscientiousness. *Human Performance Journal*, 26(1), 20-43. doi:10.1080/08959285.2012.736899

Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse Researcher*, 20(4), 12-17. Retrieved from <http://www.nursere searcher.co.uk>

Howitt, D., & Cramer, D. (2011). *Introduction to research methods in psychology* (3rd ed.). Gosport, UK: Pearson Education.

Hsiao, C., Lee, Y. H., & Chen, W. J. (2015). The effect of servant leadership on customer value co-creation: A cross-level analysis of key mediating roles. *Tourism Management*, 49, 45-57. doi:10.1016/j.tourman.2015.02.012

Hubrich, K., & Tetlow, R. J. (2015). Financial stress and economic dynamics: The transmission of crises. *Journal of Monetary Economics*, 70, 100-115. doi:10.1016/j.jmoneco.2014.09.005

Hvalic-Touzery, S., Hopia, H., Sihvonen, S., Diwan, S., Sen, S., & Skela-Savic, B. (2017). Perspectives on enhancing international practical training of students in health and social care study programs: A qualitative descriptive case study. *Nurse Education Today*, 48, 40-47. doi:10.1016/j.nedt.2016.09.013

Ihlanfeldt, K. R., & Mayock, T. (2014). Foreclosures and local government budgets. *Regional Science and Urban Economics* 53, 135-137. doi:10.2139/ssrn.2469342

- Iorio, J., & Taylor, J. E. (2015). Precursors to engaged leaders in virtual project teams. *International Journal of Project Management*, *33*, 395-405.  
doi:10.1016/j.ijproman.2014.06.007
- Iscan, O. F., Ersari, G., & Naktiyok, A. (2014). Effect of leadership style on perceived organizational performance and innovation: The role of transformational leadership beyond the impact of transactional leadership—an application among Turkish SME's. *Procedia-Social and Behavioral Sciences*, *150*, 881-889.  
doi:10.1016/j.sbspro.2014.09.097
- James, D. M., Pilnick, A., Hall, A., & Collins, L. (2016). Participants' use of enacted scenes in research interviews: A method for reflexive analysis in health and social care. *Social Science & Medicine*, *151*, 38-45.  
doi:10.1016/j.socscimed.2015.12.040
- Kaczynski, D., Salmona, M., & Smith, T. (2014). Qualitative research in finance. *Australian Journal of Management*, *39*, 127-135.  
doi:10.1177/0312896212469611
- Karter, M. J., & Stein, G. P. (2013). *U.S. fire department profile 2012*. Retrieved from the National Fire Protection Association <http://www.nfpa.org>
- Kasdan, D. O. (2015). Emergency management 2.0: This time, it's financial. *Urban Affairs Review*, *51*(1), 1-2. doi:10.1177/1078087415574730
- Kaufman, S., Ozawa, C. P., & Shmueli, D. F. (2014). Evaluating participatory decision processes: Which methods inform reflective practice? *Evaluation and Program Planning*, *42*, 11-20. doi:10.1016/j.evlpogplan.2013.08.002

- Kniffin, K. M., Wansink, B., Devine, C. M., & Sobal, J. (2015). Eating together at the firehouse: How workplace commensality relates to the performance of firefighters. *Human Performance Journal*, 28, 281-306.  
doi:10.1080/08959285.2015.1021049
- Koc, S., & Durmaz, V. (2015). Airport corporate sustainability: An analysis of *Behavioral Sciences*, 181, 158-170. doi:10.1016/j.sbspro.2015.04.877
- Krasuski, A., Kreski, K., & Azowy, S. (2012). A method for estimating the efficiency of commanding in the state fire service of Poland. *Springer Science & Business Media*, 48, 795-805. Retrieved from <http://www.springer.com>
- Lang, G., & Ohana, M. (2012). Are management fashions dangerous for organizations? *International Journal of Business & Management*, 7(20), 81-89.  
doi:10.5539/ijbm.v7n20p81
- Lehmann, C. M., & Heagy, C. D. (2014). Organizing information into useful management reports: Short cases to illustrate reporting principles and coding. *Journal of Accounting Education*, 32, 130-145.  
doi:10.1016/j.jaccedu.2014.03.001
- Leonard, H. B., & Howitt, A. M. (2010). Organizing responses to extreme emergencies: The Victorian brushfires of 2009. *Australian Journal of Public Administration*, 69, 372-386. doi:10.1111/j.1467-8500.2010.00695.x
- Light, A. (2016). *An examination of the ascension to and experiences in the metropolitan chief fire officer position: Implications for leadership, policy and*



*practice*. (Electronic Thesis or Dissertation). Retrieved from

<https://etd.ohiolink.edu/>

Lilian, S. C. (2014). Virtual teams: Opportunities and challenges for e-leaders.

*Procedia-Social and Behavioral Sciences*, *110*, 1251-1261.

doi:10.1016/j.sbspro.2013.12.972

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

Ling, Q., Lin, M., & Wu, X. (2016). The trickle-down effect of servant leadership on

frontline employee service behaviors and performance: A multilevel study of

Chinese hotels. *Tourism Management*, *52*, 341-368.

doi:10.1016/j.tourman.2015.07.008

Liu, C., Eubanks, D. L., & Chater, N. (2015). The weakness of strong ties: Sampling

bias, social ties, and nepotism in family business succession. *The Leadership*

*Quarterly*, *26*, 419-435. doi:10.1016/j.leaqua.2015.02.007

Lloyd-Rees, J. (2015). How emergency nurse practitioners view their role within the

emergency department: A qualitative study. *International Emergency Nursing*.

*24*(1), 46-53. doi:10.1016/j.ienj.2015.06.002

Luo, Y., & van den Brand, M. (2016). Metrics design for safety assessment. *Information*

*and Software Technology*. *73*, 151-163. doi:10.1016/j.infsof.2015.12.012

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative

interview studies: Guided by information power. *Qualitative Health*

*Research*, *26*, 1753-1760. doi:10.1177/1049732315617444

Mann, S. C., & Islam, T. (2015). The roles and involvement of local government human

resource professionals in coastal cities emergency planning. *Journal of*

*Homeland Security and Emergency Management*, 12, 145-168.

doi:10.1515/jhsem-2013-0087

Mansour, M. (2016). Quantifying the intangible costs related to non-ergonomic work conditions and work injuries based on the stress level among employees. *Safety Science*, 82, 283-288. doi:10.1016/j.ssci.2015.09.007

Marsh, C. (2013). Business executives' perceptions of ethical leadership and its development. *Journal of Business Ethics*, 114, 565-582. doi:10.1007/s10551-012-1366-7

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research: A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, 54(1), 11-22. Retrieved from <http://www.iacis.org/jcis/jcis.php>

Marshall, C., & Rossman, G. (2016). *Designing qualitative research* (6<sup>th</sup> ed.). Thousand Oaks, CA: Sage Publications.

Marucci-Wellman, H. R., Courtney, T. K., Corns, H. L., Sorock, G. S., Webster, B. S., Wasiak, R., . . . & Leamon, T. B. (2015). The direct cost burden of 13 years of disabling workplace injuries in the U.S. (1998–2010): Findings from the Liberty Mutual Workplace Safety Index. *Journal of Safety Research*, 55(1), 53-62. doi:10.1016/j.jsr.2015.07.002

Mathieu, C., Babiak, P., Jones, D. N., Neumann, C., & Hare, R. D. (2012). What are the effects of psychopathic traits in a supervisor on employees' psychological

- distress? *Journal of Organizational Culture, Communications, and Conflict*, 16(2), 81-84. Retrieved from [www.alliedacademies.org](http://www.alliedacademies.org)
- McCleskey, J. (2014). Situational, transformational, and transactional leadership. *Journal of Business Studies Quarterly*, 5(4), 117-130. Retrieved from [www.jbsq.org/](http://www.jbsq.org/)
- McFarland, C., & Pagano, M., A. (2016). City fiscal conditions 2016. *National League of Cities*, 1-19. Retrieved from [www.nlc.org/](http://www.nlc.org/)
- Miles, M. B., Huberman, A. M., & Saldana, J. (2013). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: SAGE Publications.
- Mirchandani, D. A., & Lederer, A. L. (2014). The impact of core and infrastructure business activities on information systems planning and effectiveness. *International Journal of Information Management*, 34, 622-633.  
doi:10.1016/j.ijinfomgt.2014.06.001
- Molenberghs, G., Kenward, M., Aerts, M., Verbeke, G., Tsiatis, A., Davidian, M., & Rizopoulos, D. (2014). On random sample size, ignorability, ancillarity, completeness, separability, and degeneracy: Sequential trials, random sample sizes, and missing data. *Statistical Methods in Medical Research*, 23(1), 11-41.  
doi:10.1177/0962280212445801
- Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage Publications.

- Mumford, M. D., Watts, L. L., & Partlow, P. J. (2015). Leader cognition: Approaches and findings. *Leadership Quarterly, 26*, 301-306.  
doi:10.1016/j.leaqua.2015.03.005
- National Fire Protection Association (NFPA). (2014). *NFPA 1021, Standard for fire officer professional qualifications*. Quincy, MA: National Fire Protection Association.
- Nielsen, M. B., Skogstad, A., Matthiesen, S. B., & Einarsen, S. (2016). The importance of a multidimensional and temporal design in research on leadership and workplace safety. *Leadership Quarterly, 27*, 142-155.  
doi:10.1016/j.leaqua.2015.08.003
- Nkomo, S., & Hoobler, J. M. (2014). A historical perspective on diversity ideologies in the United States: Reflections on human resource management research and practice. *Human Resource Management Review, 24*, 245-257.  
doi:10.1016/j.hrmr.2014.03.006
- Nollenberger, K., Maher, C., Beach, P., & McGee, K. M. (2012). Budget priorities and community perceptions of service quality and importance. *Journal of Public Budgeting, Accounting, & Financial Management, 24*, 255-277. Retrieved from <http://www.pracademics.com>
- Nutt, P. C. (2014). National differences in decision-making. *International Journal of Management Concepts and Philosophy, 8*(1), 23-49.  
doi:10.1504/IJMCP.2014.059049

- O'Reilly, M., & Parker, N. (2013). 'Unsatisfactory Saturation': A critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative Research*, *13*, 190-197. doi:10.1177/1468794112446106
- Palmiotto, T. (2012). Mentoring and the millennial: An old concept is new again. *The RMA Journal*, *59*(7), 26-27. Retrieved from <http://www.rmahq.org/tools-publications/the-rma-journal>
- Parry, K., Mumford, M. D., Bower, I., & Watts, L. L. (2014). Qualitative and historiometric methods in leadership research: A review of the first 25 years of The Leadership Quarterly. *Leadership Quarterly*, *25*, 132-151. doi:10.1016/j.leaqua.2013.11.006
- Parry, S., Rowley, J., Jones, R., & Kupiec-Teahan, B. (2012). Customer-perceived value in business-to-business relationships: A study of software customers. *Journal of Marketing Management*, *28*, 887-911. doi:10.1080/0267257X.2012.698637
- Patterson, P. D., Smith, K. J., & Hostler, D. (2016). Cost-effectiveness of workplace wellness to prevent cardiovascular events among U.S. firefighters. *BMC Cardiovascular Disorders*, *16*, 229. doi:10.1186/s12872-016-0414-0
- Perry, N. C., Wiggins, M. W., Childs, M., & Fogarty, G. (2012). Can reduced processing decision support interfaces improve the decision-making of less experience incident commanders? *Decision Support Systems*, *52*, 497-504. Retrieved from <http://www.journals.elsevier.com>
- Pilbeam, C., Davidson, R., Doherty, N., & Denyer, D. (2016). What learning happens?: Using audio diaries to capture learning in response to safety-related events

within retail and logistics organizations. *Safety Science*, 81, 59-67.

doi:10.1016/j.ssci.2015.07.034

Pitchforth, J., Wu, P., & Mengersen, K. (2014). Applying a validation framework to a working airport terminal model. *Expert Systems with Applications*, 41, 4388-4400. doi:10.1016/j.eswa.2014.01.013

Plankey-Videla, N. (2012). Informed consent as process: Problematizing informed consent in organizational ethnographies. *Qualitative Sociology*, 35(1), 1-21. doi:10.1007/s11133-011-9212-2

Pollack, K. M., Poplin, G. S., Griffin, S., Peate, W., Nash, V., Nied, E., ... & Burgess, J. L. (2016). Implementing risk management to reduce injuries in the US Fire Service. *Journal of Safety Research*, 21-25. doi:10.1016/j.jsr.2016.11.003

Posey, C., Roberts, T. L., Lowry, P. B., & Hightower, R. T. (2014). Bridging the divide: A qualitative comparison of information security thought patterns between information security professionals and ordinary organizational insiders. *Information & Management*, 51, 551-567. doi:10.1016/j.im.2014.03.009

Puteh, F., Kaliannan, M., & Alam, N. (2015). Learning for professional development via peers: A system theory approach. *Procedia-Social and Behavioral Sciences*, 172(1), 88-95. doi:10.1016/j.sbspro.2015.01.340

Ratchford, E. V., Carson, K. A., Jones, S. R., & Ashen, M. D. (2014). Usefulness of coronary and carotid imaging rather than traditional atherosclerotic risk factors to identify firefighters at increased risk for cardiovascular disease. *The American Journal of Cardiology*, 113, 1499-1504. doi:10.1016/j.amjcard.2014.02.003

- Reed, G. S., Petty, M. D., Jones, N. J., Morris, A. W., Ballenger, J. P., & Delugach, H. S. (2015). A principles-based model of ethical considerations in military decision making. *Journal of Defense Modeling and Simulation: Applications, Methodology, and Technology*, 3(2), 1-17. doi:10.1177/1548512915581213
- Reilly, T. (2013). Reforming public pay and benefits. *State and Local Government Review*, 45(1), 57-64. doi:10.1177/0160323X13477663
- Riordan, D. O., Byrne, S., Fleming, A., Kearney, P. M., Galvin, R., & Sinnott, C. (2017). GPs' perspectives on prescribing for older people in primary care: A qualitative study. *British Journal of Clinical Pharmacology*. doi:10.1111/bcp.13233
- Rosenthal, M. (2016). Qualitative research methods: Why, when, and how to conduct interviews and focus groups in pharmacy research. *Currents in Pharmacy Teaching and Learning*, 8, 509-516. doi:10.1016/j.cptl.2016.03.021
- Ruetzler, T., Baker, W., Reynolds, D., Taylor, J., & Allen, B. (2014). Perceptions of technical skills required for successful management in the hospitality industry: An exploratory study using conjoint analysis. *International Journal of Hospitality Management*, 39, 157-164. doi:10.1016/j.ijhm.2014.02.012
- Rumsey, M. G. (2014). Introduction to the special issue on conceptualizing and predicting performance of military officers. *Military Psychology*, 26, 253. doi:10.1037/mil0000049

- Saetrevik, B. (2015). Psychophysiology, task complexity, and team factors determine emergency response teams' shared beliefs. *Safety Science, 78*, 117-123.  
doi:10.1016/j.ssci.2015.04.017
- Salmon, P. M., Goode, N., Archer, F., Spencer, C., McArdle, D., & McClure, R. J. (2014). A systems approach to examining disaster response: Using Accimap to describe the factors influencing bushfire response. *Safety Science, 70*, 114-122.  
doi:10.1016/j.ssci.2014.05.003
- Santos, F. M. (2012). A positive theory of social entrepreneurship. *Journal of Business Ethics, 111*, 335-351. doi:10.1007/s10551-012-1413-4
- Schaubroeck, J. M., Lam, S. S., & Peng, A. C. (2016). Can peers' ethical and transformational leadership improve coworkers' service quality? A latent growth analysis. *Organizational Behavior and Human Decision Processes, 133*(1), 45-58. doi:10.1016/j.obhdp.2016.02.002
- Sealy, I., Wehrmeyer, W., France, C., & Leach, M. (2013). Sustainable development management systems in global business organizations. *Management Research Review, 33*, 1083-1096. doi:10.1108/01409171011085912
- Sears, J. M., Blunar, L., & Bowman, S. M. (2014). Predicting work-related disability and medical cost outcomes: A comparison of injury severity scoring methods. *Injury, 45*(1), 16-22. doi:10.1016/j.injury.2012.12.024
- Sharma, S., & Aniket, G. C. (2014). A qualitative study on evolution of relationships between third-party logistics providers and customers into strategic alliances.



*Strategic Outsourcing: An International Journal*, 7(1), 2–17. doi:10.1108/SO-08-2013-0015

Shrestha, S., & Joshi, S. (2015). Lived experiences of the staff nurses during first six months of their employment in a university hospital, Kavre. *Journal of Nepal Health Research Council*, 12, 182-186. Retrieved from <http://www.jnhrc.com.np>

Sienkiewicz-Malyjurek, K. (2016). Determinants and attributes of leadership in the Public Safety Management System. *Procedia Economics and Finance*, 39, 115-121. doi:10.1016/S2212-5671(16)30254-4

Simola, S. (2014). Teaching corporate crisis management through business ethics education. *European Journal of Training and Development*, 38, 483-503. doi:10.1108/EJTD-05-2013-0055

Smith, T. D., Eldridge, F., & DeJoy, D. M. (2016). Safety-specific transformational and passive leadership influences on firefighter safety climate perceptions and safety behavior outcomes. *Safety Science*, 86(1), 92-97. doi:10.1016/j.ssci.2016.02.019

Souder, D., Simsek, Z., & Johnson, S. G. (2012). The differing effects of agent and founder CEOs on the firm's market expansion. *Strategic Management Journal*, 33(1), 23-41. doi:10.1002/smj.944

Stam, W., Arzlanian, S., & Elfring, T. (2014). Social capital of entrepreneurs and small firm performance: A meta-analysis of contextual and methodological moderators. *Journal of Business Venturing*, 29, 152-173. doi:10.1016/j.jbusvent.2013.01.002

Stergiou-Kita, M., Mansfield, E., Bezo, R., Colantonio, A., Garritano, E., Lafrance, M., .

- . . & Theberge, N. (2015). Danger zone: Men, masculinity, and occupational health and safety in high-risk occupations. *Safety Science*, *80*, 213-220. doi:10.1016/j.ssci.2015.07.029
- Steyn, B., & Niemann, L. (2014). Strategic role of public relations in enterprise strategy, governance and improvability: A normative framework. *Public Relations Review*, *40*, 171-183. doi:10.1016/j.pubrev.2013.09.001
- Taylor, D., Tharapos, M., & Sidaway, S. (2014). Downward accountability for a natural disaster recovery effort: Evidence and issues from Australia's Black Saturday. *Critical Perspectives on Accounting*, *25*, 633-651. doi:10.1016/j.cpa.2013.01.003
- Temporado, A. H. (2012). *The influence of US Army fire service organizational culture on firefighter safety* (Doctoral dissertation, University of Phoenix).
- The, B., Reininga, I. H., El Moumni, M., & Eygendaal, D. (2013). Elbow-specific clinical rating systems: Extent of established validity, reliability, and responsiveness. *Journal of Shoulder and Elbow Surgery*, *22*, 1380-1394. doi:10.1016/j.jse.2013.04.013
- Tick, H., Chauvin, S. W., Brown, M., & Haramati, A. (2015). Core competencies in integrative pain care for entry-level primary care physicians. *Pain Medicine*, *16*, 2090-2097. doi:10.1111/pme.12818
- Torres, A., & Bligh, M. (2012). How far can I trust you?: Impact of distance and cultural values of leaders' trustworthiness. *Journal of Leadership, Accountability and Ethics*, *9*(2), 23-38. Retrieved from <http://www.na-businesspress.com>

- Torres, E. N., & Mejia, C. (2017). Asynchronous video interviews in the hospitality industry: Considerations for virtual employee selection. *International Journal of Hospitality Management*, *61*(1), 4-13. doi:10.1016/j.ijhm.2016.10.012
- Trussel, J. M., & Patrick, P. A. (2013). The symptoms and consequences of fiscal distress in municipalities: An investigation of reductions in public services. *Accounting & the Public Interest*, *13*, 151-171. doi:10.2308/apin-10373a
- Tsatsou, P. (2016). Digital technologies in the research process: Lessons from the digital research community in the UK. *Computers in Human Behavior*, *61*, 597-608. doi:10.1016/j.chb.2016.03.053
- Unluer, S. (2012). Being an insider researcher while conducting case study research. *The Qualitative Report*, *17*(29), 1-14. Retrieved from <http://www.nova.edu/ssss/QR/index.html>
- Van der Voet, J. (2013). The effectiveness and specificity of change management in a public organization: Transformational leadership and a bureaucratic organizational structure. *European Management*, *32*, 373-382. doi:10.1016/j.emj.2013.10.001
- Vardaman, J. M., Gondo, M. B., & Allen, D. G. (2014). Ethical climate and pro-social rule breaking in the workplace. *Human Resource Management Review*, *24*, 108-118. doi:10.1016/j.hrmr.2012.05.001
- Villemain, A., & Godon, P. (2016). Toward a resilient organization: The management of unexpected hazard on the polar traverse. *Safety Science*, *83*, 1-9. doi:10.1016/j.ssci.2016.03.008

- von Thiele Schwarz, U., Hasson, H., & Tafvelin, S. (2016). Leadership training as an occupational health intervention: Improved safety and improved productivity. *Safety Science, 81*, 35-45. doi:10.1016/j.ssci.2015.07.020
- Wang, D., Qi, C., & Wang, H. (2014). Improving emergency response collaboration and resource allocation by task network mapping and analysis. *Safety Science, 70*(1), 9-18. doi:10.1016/j.ssci.2014.05.005
- Walters, J. (2011). *Firefighters feel the squeeze of shrinking budgets*. Retrieved from <http://www.governing.com/topics/public-workforce/firefighters-feel-squeeze-shrinking-budgets.html>
- Wex, F., Schryen, G., Feuerriegel, S., & Neumann, D. (2014). Emergency response in natural disaster management: Allocation and scheduling of rescue units. *European Journal of Operational Research, 235*, 697-708. doi:10.1016/j.ejor.2013.10.029
- Wilson, J. M., & Grammich, C. A. (2015). Deconsolidation of public-safety agencies providing police and fire services. *International criminal justice review, 25*, 361-378. doi:10.1177/1057567715618590
- Winn, M., Kirchgeorg, M., Griffiths, A., Linnenluecke, M. K., & Gunther, E. (2011). Impacts from climate change on organizations: A conceptual foundation. *Business Strategy & the Environment, 20*, 157-173. doi:10.1002/bse.679
- Yap, Q. S., & Webber, J. K. (2015). Developing corporate culture in a training department: A qualitative case study of internal and outsourced staff. *Global Conference on Business and Finance Proceedings, 6*, 132-145. Retrieved from

<http://www.theibfr.com/proceedings.htm>

Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, 20, 134-152. Retrieved from:

<http://nsuworks.nova.edu/tqr/vol20/iss2/12>

Yin, R. K. (2013). *Case study research Design and methods* (5th ed.). Thousand Oaks, CA: Sage Publications.

Yin, R. K. (2015). *Qualitative research from start to finish* (2nd<sup>nd</sup> ed.). City, state: Guilford Publications.

Yucel, I., McMillan, A., & Richard, O. C. (2014). Does CEO transformational leadership influence top executive normative commitment? *Journal of Business Research*, 67, 1170-1177. doi:10.1016/j.jbusres.2013.05.005

Zashkiani, A., Rahmandad, H., & Jardine, A. K. (2011). Mapping the dynamics of overall equipment effectiveness to enhance asset management practices. *Journal of Quality in Maintenance Engineering*, 17(1), 74-92.  
doi:10.1108/13442511111116268

Zavattaro, S. M., Daspit, J. J., & Adams, F. G. (2015). Assessing managerial methods for evaluating place brand equity: A qualitative investigation. *Tourism Management*, 47(1), 11-21. doi:10.1016/j.tourman.2014.08.018

Zehir, C., Cinar, F., & Sengul, H. (2016). Role of stakeholder participation between transparency and qualitative and quantitative performance relations: An application at hospital managements. *Procedia-Social and Behavioral Sciences*, 229, 234-245. doi:10.1016/j.sbspro.2016.07.

## Appendix A: Interview

<p>Stage: The interview will take place in a quiet location free of distractions such as a quiet room at their home.</p>	<p><b>Script:</b> The proposed study is being conducted by Leo R. Sedlmeyer who is a doctoral student at Walden University. Research gathered in the proposed study will be used to explore the leadership strategies for managing costs of hazardous operations following emergencies with the goal of identifying the factors that contribute to the success of their processes.</p> <p>During each interview –          Watch for non-verbal          Ask follow-up probing questions          Paraphrase</p>
1.	<u>What strategies are you using to manage hazardous operational costs?</u>
2.	<u>What method did you find worked best to manage hazardous operational costs?</u>
3.	<u>What unique leadership strategies are needed to manage costs in safety-related tasks?</u>
4.	<u>What strategy best represents your leadership in cost management as a hazardous operations leader?</u>
5.	<u>Is there anything else you would like to add that you may not have addressed?</u>
Interview Wrap Up	<u>I want to thank you for your participation in my doctoral study. Your participation will assist your industry in moving forward by identifying leadership strategies needed for managing costs of hazardous operations following emergencies.</u>
Member Checking follow-up interview	Within a week of this interview, I will contact you by telephone and schedule a follow-up interview. During this interview, I will present a summary of my interpretations of your responses for your review of accuracy.

## Appendix B: Interview Questions

### **Interview Questions**

1. What strategies are you using to manage hazardous operational costs?
2. What method did you find worked best to manage hazardous operational costs?
3. What unique leadership strategies are needed to manage costs in safety-related tasks?
4. What strategy best represents your leadership in cost management as a hazardous operations leader?
5. Is there anything else you would like to add that you may not have addressed?