

Exploring How the Collegial Leadership Style Predicts
Employee Satisfaction and Organizational Commitment within Federal Agencies

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by

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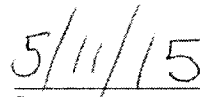
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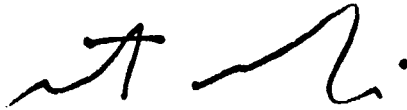


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Abstract

The general problem was that federal employee satisfaction ratings of their organizational leadership and workplace had decreased to their lowest levels Government-wide, since 2003. Researchers studying strategies to promote effective leadership behaviors found a relationship between the dimensions collegiality, distributed power, and facilitative leadership of the collegial leadership style (CLS), employee satisfaction, and organizational commitment in various organizational cultures. Specifically, the CLS was found to be essential for positively fostering academic cultures and influencing academic employees; and increasing organizational effective in hotels and restaurants. However, generalization of previous research findings to federal agencies was prohibited because of differences in organizational structure, taxpayers as stakeholders, public service oriented missions, and funding methodology of federal agencies. Additionally, research was also needed to extend the collegial leadership model in order to gain an enhanced understanding of the CLS applicability in nonacademic organizations and extend the model to new populations. The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies. In this study, the participant sample consisted of 122 full-time federal government employees (civilians) between the ages of 18 and 65 throughout the US. Data were collected using five already published and validated assessment tools combined into one study questionnaire that was administered via the Internet. Inferential analyses included Person correlation coefficient and multiple regression analysis to determine the predictive relationship of the CLS dimensions

(predictor variable) on employee satisfaction and organizational commitment (criterion variables). The findings were significant between the combined CLS dimensions and employee satisfaction ($R^2 = .621$, $F(4, 117) = 47.933$ $p < .01$); and between the combined CLS dimensions and organizational commitment ($R^2 = .293$, $F(1, 117) = 12.128$, $p < .01$). That is, the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment in employees of federal agencies. Based on the findings it was recommended that federal government leaders should construct strategies that include the utilization and training of the CLS as a method to increase employee satisfaction and organizational commitment. This study extends the CLS into a new population (US federal government) and enhances the understanding of the impact of the utilization of the CLS.

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This incredible journey was not only challenging, but rewarding as it fostered in me a sense of accomplishment, contributed to the field of organizational leadership, and allowed me to be a role model to my children by demonstrating the importance of education and “never giving up”, even when things are difficult.

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Chapter 1: Introduction

An organization's achievement hinges on leaders' ability to utilize resources, which increases the likelihood for successful accomplishment of the organizational mission (Ciulla, 2006). A leader is defined as an individual who can influence others to sacrifice their personal dreams and pursue a collective purpose through the demonstration of leadership (George & Sims, 2007). Explicit behaviors leaders manifest have been shown to both negatively and positively impact employees' perspectives and productivity (Rooke & Torbert, 2005). Specifically, ineffective leaders often demonstrate a lack of leadership and behaviors that employees perceive as unsupportive and deficient, which often affect organizational effectiveness, insofar as decreasing employee satisfaction and organizational commitment (Ciulla, 2006; Freedman, 2012).

Some researchers suggested leaders should be required to demonstrate the collegial leadership style (CLS), as a method for improving organizational effectiveness (Barth, 2006). Leaders, who demonstrate the CLS improve employee skills, invoke trust, motivate employees, and promote a positive culture with the CLS dimensions collegiality, distributed power, and facilitative leadership (Brundrett, 1998; Howze, 2003; Shrifian, 2011). Although the majority of research on the CLS has been conducted in academic cultures such as primary schools, universities, and libraries (Akert & Martin, 2012), some research on the topic has been conducted in hospitals, restaurants, and Roman Catholic dioceses (Adhikari, 2010; Lazega & Wattebled, 2011; Padgett, 2013). The research results on the topic are mixed with some researchers maintaining the CLS is excessively complex and time consuming; thus, suited for academic and professional cultures (Thorpe & Kalischuk, 2003). Conversely, other researchers suggested the CLS is

suitable for all organizational cultures, as it fosters accountability, creativity, and productivity (Singh, 2013). Research on leaders' utilization of the CLS in federal agencies has not yet been conducted, but is needed to understand its impact (Joaquín & Park, 2013).

The organizational cultures of the United States (US) federal government include over 2.1 million employees across all fifty states and is regarded the largest employer in the US (Department of Labor [DOL], 2012). Based on the opinions of all 1.6-million federal employees surveyed, employee satisfaction and commitment have deteriorated the last three consecutive years with a rating of 57.8%, (Partnership for Public Change [PPC], 2013). Leadership effectiveness has been the critical element that drove the decline in employee satisfaction and commitment as it has been the lowest scoring constituent with an average rating of 51.8% (PPC, 2013). Indeed, the primary reason federal government employees left their job was due to ineffective leadership (US Government Accountability Office [GAO], 2012). Strategies to facilitate effective leadership in the federal government are clearly needed; however, before suggestions for improvement can be made research was necessary about the efficacy of the CLS within other populations (Singh, 2013).

Research was also needed to extend the collegial leadership model (CLM). The CLM was used to explain the CLS that holds promise in aiding leaders with employee satisfaction and organizational commitment challenges (Adhikari, 2010). Research was required to gain an enhanced understanding of the CLM applicability as the majority of the research on the CLM has been conducted in academic organizations and research was needed to extend the model to new populations (Singh, 2013).

Background

Leadership is about how organizational leaders (leaders of organizations) affect followers. Kouzes and Posner (2008) described leadership as an organizational leaders' ability to build relationships, their perceived credibility, and the various activities and actions organizational leaders pursue. According to Hamlin and Patel (2012), organizational leaders need to understand the behavioral characteristics, which encourage and motivate employees as well as generate a positive culture, to ensure their organization can effectively accomplish its mission. Organizational leaders' specific behaviors impact employees' perceptions (Rooke & Torbert, 2005), shape organizational cultures, and influence employees' effectiveness (Kouzes & Posner, 2008; Yukl, 2012). Moreover, organizational leaders' behaviors influence employees' perceptions of their organization, leaders, and colleagues, which in turn impacts employees' productivity, satisfaction, ability to trust, and organizational commitment (Bolman & Deal, 2008; Cartwright, 2008; Kouzes & Posner, 2008; Yukl, 2012).

The behaviors, actions, and activities organizational leaders display when assisting organizations in reaching stated goals defines their respective leadership style (Northouse, 2010); which includes factors such as organizational leaders' social skills, social intelligence, communication skills, and ethical principal (Sumner-Armstrong et al., 2008). The implementation of an appropriate leadership style is critical to employee perceptions (Iqbal, Inayat, Ijaz, & Zahid, 2012); employee performance, motivation, and commitment to their respective organization (Bahreinian, et al., 2012). For those stated reasons, the identification and use of a leadership style that positively impacts employee satisfaction and organizational commitment is critical (Joaquín & Park, 2013). Employee

motivation is influenced by leadership styles that are inclusive (McLaughlin, Young, & Hunt, 2007); and which recognize employee leadership at all levels within the organization (Leslie & Canwel, 2010).

Employee satisfaction, which is defined as the perceived feelings and opinions that individual employees have regarding their current employment (Lorber & Skela, 2012; Sakiru, D'Silva, Othman, DaudSilong, & Temitope, 2013; Solberg et al., 2012); is also contingent upon employees' perceptions of the organizational leaders' demonstrated behaviors (Sakiru et al., 2013). Employee satisfaction has been shown to be impacted at different levels based on the various behaviors that organizational leaders demonstrate (van den Pol-Grevelink et al., 2012). For example, employees with more autonomy were found to have a higher employee satisfaction rating (Heponiemi et al., 2014). Also, employee satisfaction has been shown to decrease, along with employee productivity, and the quality of the organizational products and services when leaders display behaviors that employees perceive as negative (Heponiemi et al., 2014; Lorber & Skela, 2012).

Once an individual accepts employment within an organization, they are already committed to following the organizational leadership (Baldwin, 2008). Commitment is demonstrated when employees choose to stay and forego leaving the organization, as well as by choosing to associate themselves with the organization (Mowday, Porter, & Steers, 1979). Organizational commitment can also be demonstrated through employees' level of participation and the value employees place on the achievement of the organizational goals (Porter, Steers, Mowday, & Boulian, 1974). However, Caldwell et al. (2010) claimed essential values such as trustworthiness and other moral values, if not perceived within organizational leadership, can negatively impact employee commitment

and even decrease long-term retention of employees. In contrast, Porter et al.'s (1974) results indicated that employees who have a favorable perception of the organizational leadership tend to remain with their organization. Organizational leaders' facilitation of meaningful relationships can build trust and foster organizational commitment amongst employees (Boyatzis & McKee, 2006). Employees' overall perceptions about their organizational leaders have been found to be a critical element in their turnover intention (Porter et al., 1974).

Researchers have found the CLS invokes trust, inspires, motivates, and cultivates a positive work environment (Adhikari, 2010; Brundrett, 1998; Howze, 2003; Shrifian, 2011). The CLS includes distributed power, facilitative leadership, and the encouraging of collegiality, as methods for increasing employee effectiveness, improving employee skills levels, and cultivating a positive cultural environment (Howze, 2003; Shrifian, 2011). Much of the research on the utilization of the CLS dimensions of collegiality, distributed power, and facilitative leadership has been within academic cultures; and has demonstrated the CLS can improve employee satisfaction and organizational commitment (Busher & Blease, 2000; Howze, 2003; Jarvis, 2012; Shrifian, 2011). Additionally, the implementation of the three key dimensions of the CLS collegiality, distributed power, and facilitative leadership has been determined appropriate to use in academic organizations as a method to transform traditional corporate bureaucratic systems into effective and efficient operations (Adhikari, 2010; Jarvis, 2012; Shrifian, 2011; Singh, 2013). Research on the three specific dimensions collegiality, distributed power, and facilitative leadership of the CLS in hospitals, restaurants, and Roman Catholic dioceses outside of academia also indicated employee satisfaction and

organizational commitment may be positively impacted (Adhikari, 2010; Lazega & Wattebled, 2011; Padgett, 2013). In spite of these findings, some researchers have indicated the CLS is only suitable within academia (Weinberg & Graham-Smith, 2012); and others suggested CLS is not a formal leadership strategy (Jarvis, 2010).

Within most federal agencies, employee satisfaction and organizational commitment have deteriorated over the last three consecutive years with an average employee rating of 57.8%; and employees who indicated they were leaving their agency within the next 12 months rated leadership effectiveness 35 points lower than employees who were planning to stay (PPC 2013). Research indicated leadership effectiveness has been the critical element driving the decline in employee satisfaction and commitment, as it has been the lowest scoring constituent with an average rating of 51.8% (PPC, 2013). Without the utilization of the most appropriate leadership style, it was expected that federal employee satisfaction ratings may continue to decline and strategies to augment effective leadership may be incomplete (PPC, 2013), which for federal agencies may result in the lack of retention and attraction of talented employees to accomplish the agencies' missions (GAO, 2013); that may ultimately result in the reduction of critical services and functions provided by the US Government (PPC, 2013). Moreover, the federal government's ineffective leadership equated to billions of dollars spent on avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012).

Statement of the Problem

The general problem was that federal employee satisfaction ratings of their leadership and workplace decreased to its lowest levels government-wide, since 2003

(PPC, 2012). For three consecutive years, federal employees' satisfaction and commitment declined to 57.8% (PPC, 2013). Researchers have shown that employees of ineffective leaders are unsatisfied and lack commitment (Brollier, 1985; Dobbins & Russell, 1986; Lakshman, 2008; Yukl, 2012). The federal government's ineffective leadership equated to billions of avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012).

Researchers studying strategies to promote effective leadership behaviors have found a relationship between the dimensions collegiality, facilitative leadership, and distributed power of the CLS, employee satisfaction, and organizational commitment in some organizational cultures (Adhikari, 2010; Howze, 2003). Researchers found collegial leadership is essential for positively fostering academic cultures and influencing academic employees (Shrifian, 2011); and Adhikari (2010) found the CLS increases organizational effectiveness in hotels and restaurants. However, generalization of previous research findings to federal agencies was prohibited because of differences in organizational structure, taxpayers as stakeholders, public service oriented missions, and funding methodology of federal agencies (Shah, 2011). The specific problem was that before suggestions to promote the CLS to foster employee satisfaction in federal agencies could be promulgated; an understanding of the relationship between the CLS dimensions of collegiality, facilitative leadership, and distributed power, employee satisfaction, and organizational commitment within federal agencies was required.

Research was also needed to extend the CLM in order to gain an enhanced understanding of the CLS applicability in nonacademic organizations and extend the new

populations (Singh, 2013). A study focusing on the CLS in a federal culture was needed that may lead to strategies to augment effective leadership, which could increase federal employee satisfaction ratings (PPC, 2013).

Purpose of the Study

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment in employees working in federal agencies. The population of the study was approximately 316,700 federal government employees throughout the US. The sample of the study was 122 participants, which exceeded the minimum of 107 as deemed necessary by a priori G*Power analysis to achieve statistical power of .05. The study participants included full-time federal government employees between the ages of 18 and 65 throughout the US. The predictor variables collegiality, facilitative leadership, and distributed power of the CLS were measured with already existing instruments. Collegiality was measured with the Collegiality Scale (CS) developed by Hoy, Smith, and Sweetland's (2003), which provided statistical data about employees' perception of leaders' portrayal of collegiality; as well as employees' perceptions of colleagues' collegiality. Facilitative leadership was measured with the Facilitative Leadership Scale (FLS) developed by Hirst, Mann, Bain, Pirola-Merlo, and Richver (2004), which yielded statistical data about leaders' behaviors in facilitating and promoting collegiality within the workplace. Distributed power was measured with the Distributed Power Scale (DPS) developed by Slattery and Goodman (2009), and represented employees' perception of distributed power within the organization. To gather statistical data about employee satisfaction, participants

completed the employee satisfaction scale (ESS) developed by Andrews and Withey (1976). Participants also completed the organizational commitment scale (OCS) developed by Marsden, Kalleberg, and Cook (1993), which gathered and examined information regarding the degree of employees' commitment to their organization. Descriptive analyses included calculation of variable means, standard deviations, and graphs for each of the study variables. Inferential analyses included multiple regression analysis to determine the predictive relationship of the CLS dimensions collegiality, facilitative leadership, and distributed power (predictor variables) on employee satisfaction and organizational commitment (criterion variables).

Theoretical Framework

The theoretical framework expanded in the current research is the collegial leadership model (CLM). The CLM was developed from behavioral science research (Davis, 1968); rooted in educational research (Brundrett, 1998); and is part of the social behavior theory, which is used to explain the CLS social constructs related to organizational culture, friendliness, and social connection (Hatfield, 2006). The concept of the CLS was developed as part of the educational development theory (Bush, 2000); is the leading paradigm relating to the management of academic institutions (Brundrett, 1998); and is a leadership and power relationship (Davis, 1968; Jarvis, 2012).

Researchers have recently examined the CLM to investigate the CLS as part of organizational effectiveness (Akert & Martin, 2012). While investigating organizational effectiveness of the CLS within academia, researchers concluded the implementation of the CLS has a positive and significant influence on: employee interaction, sharing of resources, and collaborative behaviors (Freedman, 2012); professional development, the

establishment of common goals, and the alignment of expectations (Hoy et al., 2003; Shah & Abualrob, 2012); employee productivity and effectiveness (Likert, 1977; Shrifian, 2011); employees' motivation, customer satisfaction (Adhikari, 2010); and organizational commitment (Balsmeyer, Haubrich, & Quinn, 1996).

The CLM encompasses the terms collegiality, shared leadership, distributed power, and facilitative leadership when researchers study the CLS (Shrifian, 2011; Singh, 2013). Collegiality is defined as “the cooperative relationship of colleagues” (Collegiality.In.Merriam-Webster, n.d.). Employee collegiality also refers to positive collaboration and cooperation amongst employees (Hatfield, 2006). Leaders' collegiality is defined as supportive and positive behavior demonstrated by leaders (Hoy, Hoffman, Sabo, & Bliss, 1996). Researchers have linked collegiality to organizational citizenship behaviors of sportsmanship, courtesy, and quick to offer assistance to others (Freedman, 2012). Fostering employee collegiality is one of collegial leaders' mechanisms for the successful management of academic institutes' tasks and goals (Brundrett, 1998). Collegiality has been found to be a fundamental aspect of positive organizational cultures, employee morale, and assists in generating positive relationships between leaders and employees (Katz & Kahn, 1978). When workplace collegiality is present, continuous growth and sharing amongst employees within the organizational culture exists (Hatfield, 2006). In contrast, when employees display a lack of collegiality they can experience stress, aloneness, dissatisfaction, and heightened conflict (Hatfield, 2006). Moreover, researchers concluded that in academia, where employees often demonstrate a lack of collegiality, an erosion of employees' professional autonomy was observed (Brundrett, 1998).

Shrifian (2011) examined the CLM by investigating the relationship between the CLS and organizational impacts in teachers in Iran. Shrifian determined that the CLS characteristics of human relations, team building, and employee flexibility all positively impacted organizational effectiveness. Additionally, it was revealed that when leaders distribute power employees' morale is positively impacted (Shrifian, 2011). Although Shrifian suggested the CLS should increase employee satisfaction and organizational commitment, the constructs of employee satisfaction and organizational commitment were not specifically investigated. Therefore, additional research was needed on this topic to address these variables, especially in a non-educational setting (Giffords, 2009), and within the US (Chew & Sharma, 2005).

Akert and Martin (2012) employed a quantitative approach to examine the CLM to gain an understanding of the various impacts of distributed power of the CLS by surveying teachers and principals. The distribution of power was determined to be a key aspect of organizational success (Akert & Martin, 2012). Researchers suggested that for organizations to be successful, collegially, distributed power, and facilitative leadership of the CLS must be employed (Akert & Martin, 2012; Howze, 2003). However, more research was needed in settings outside of education to determine if such findings could be generalized across employment disciplines (Giffords, 2009). Specifically, information about collegiate leadership behaviors was needed in federal agencies (White, Carvalho, & Riordanc, 2011) and would extend the CLM to a new population. Moreover, because most research about the CLS has been conducted in academia, generalizing the findings from previous research outside of academia and to the federal government was not appropriate due to the differences in organizational structures, stakeholders, missions,

and cultures (Giffords, 2009; Shah, 2011); therefore, additional research was needed. The results of the completed study extend the CLM outside of academia into federal agencies and extend the model to address the relationship between the CLS and work variables, including, employee satisfaction and organizational commitment, as suggested by (Hatfield, 2006).

Research Questions

A quantitative, non-experimental predictive correlational study was conducted to assess the relationship between the three CLS dimensions collegiality, facilitative leadership, and distributed power, employee satisfaction, and organizational commitment within federal agencies. What was unknown was whether or not dimensions of the CLS (collegiality, facilitative leadership, and distributed power) predict employee satisfaction and organizational commitment with federal agencies. The following research questions and hypotheses were addressed.

Q1. To what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government?

Q2. To what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government?

Hypotheses

H1₀. Collegiality, facilitative leadership, and distributed power of the CLS do not predict employee satisfaction in employees of the federal government

H1_a. Collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government.

H2₀. Collegiality, facilitative leadership, and distributed power of the CLS do not predict organizational commitment in employees of the federal government.

H2_a. Collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government.

Nature of the Study

The purpose of the quantitative non-experimental predictive correlational study was to explore how collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies. A quantitative research approach was used for the current study. The results of a quantitative study allow researchers to clarify relationships among specified variables (Castellan, 2010; Trochim & Donnelly, 2008). The correlational design was appropriate for the current study because information about the predictive relationship between variables was needed.

The study population was approximately 316,700 federal government employees located throughout the US. The sample of the study was 122 participants, which exceeded the minimum of 107 as deemed necessary by a priori G*Power analysis to achieve statistical power of .05. The study participants included full-time federal government employees between the ages of 18 and 65 employed throughout the US. The dimensions collegiality, facilitative leadership, and distributed power of the CLS were measured. For the CLS dimension collegiality, participants completed a Collegiality Scale (CS) developed by Hoy et al. (2003) to gather statistical data about employees'

perception of leaders' portrayal of collegiality; as well as employees' perceptions of colleagues' collegiality. For the CLS dimension facilitative leadership, participants completed a Facilitative Leadership Scale (FLS) developed by Hirst et al. (2004) to gather statistical data about leaders' behaviors in facilitating and promoting collegiality within the workplace. For the CLS dimension distributed power, participants completed a Distributed Power Scale (DPS) developed by Slattery and Goodman (2009) to gather information about employees' perception of distributed power within federal agencies. To gather statistical data about employees' overall job satisfaction, participants completed the Employee Satisfaction Scale (ESS) developed by Andrews and Withey (1976). Participants also completed the Organizational Commitment Scale (OCS) developed by Marsden et al. (1993) to gather and examine information regarding the degree of employees' commitment to their organization. Descriptive analyses included calculation of variable means, standard deviations, and graphs for each of the study variables. Inferential analyses included multiple regression analysis to determine the predictive relationship of the various dimensions of CLSs (predictor variable) on employee satisfaction and organizational commitment (criterion variables).

Significance of the Study

This study is significant because the ineffective leadership within the federal government equates to billions of dollars in avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012). The results of the study may benefit future researchers, as well as federal government employees and leaders. This study is also significant as reporting about the investigation of the CLS will enhance the literature on

the CLM within non-academic organizations. Additionally, the study findings may be used to enhance federal government leaders' understanding of the impact of promoting the CLS or aspects of the CLS, on employee satisfaction and organizational commitment.

There are several possible practical ramifications of the study findings. As employees' perceptions and behaviors are highly affected by the behavior of organizational leaders (Porter et al., 1974; Sabir, Sohail, & Khan, 2011; Secretan, 2005); leaders' behaviors must be addressed in strategies for improving employee satisfaction and organizational commitment (PPC, 2013). The findings from this study may provide federal government leaders with an enhanced understanding of the CLS' influences on employee satisfaction and organizational commitment within other populations (Giffords, 2009; Singh, 2013). Moreover, this study focused on the CLS in a federal culture may lead to strategies to augment effective leadership, which may in turn increase federal employee satisfaction ratings (PPC, 2013).

Definition of Key Terms

Collegial leadership style. The characteristics of the CLS consist of distributed power; facilitation of employee collaboration and cooperation; encouragement of employee cooperation and sharing of resources; and demonstration of collegiality behaviors of mutual trust, respect, and friendliness (Howze, 2003). In the current study the CLS dimensions of collegiality, facilitative leadership, and distributed power are predictor variables that were measured with already validated instruments. Total dimension scores were developed for each predictor variable and the relationship between the predictors on the criterion variables of employee satisfaction and organizational commitment was evaluated.

Collegiality. Turner and Willis (1981) defined collegiality as employee involvement in managing their respective department and organization. Collegiality is one of the dimensions of the CLS (Howze, 2003; Shrifian, 2011). Collegiality also includes the social behaviors amongst and between leaders and employees, which positively influences cooperation and culture within the organizational (ten Brummelhuis et al., 2010). Collegiality is genuine and open employee-to-employee or supervisor-to-employee interactions (Hoy, Hoffman, Sabo, & Bliss, 1996; Hoy & Tarter, 1997). According to Hoy et al. (1996) collegiality is displayed when leaders and employee are able to speak freely, but remain supportive, and receptive to others thoughts. In the current study, collegiality is a dimension of the CLS. Hoy et al. (2003), research instrument CS was used to examine the extent employees' perceived leaders demonstrate collegiality along with employees' perception of colleagues' collegiality.

Distributed power. One of the CLS dimensions is distributed power (Howze, 2003). Distributed power involves leaders sharing decision-making authority with employees (Bergman et al., 2012; Kok et al., 2009; Shrifian, 2011). Bush (2000) indicated that when leader distribute power instead of providing instruction and direction they support and guide employees in the decision making process. Distributed power consist of leaders working with many employees, which they are not directly responsible for appraisal in collegial group (Shrivastava & Nachman, 1989). In the current study, distributed power is a dimension of the CLS. Participants completed a DPS to gather information on employees' perceptions of distributed power within the organization (Slattery & Goodman, 2009, p. 1365).

Employee satisfaction. Locke (1976) defined employee satisfaction as a positive, agreeable, and enjoyable feeling regarding the assessment of one's work or experiences within the workplace. In the current study, employee satisfaction is a criterion variable that was measured with the Employee Satisfaction Scale (ESS) developed Andrews and Withey (1976). The ESS measured employee overall satisfaction (Andrews & Withey, 1976).

Facilitative leadership. Another CLS dimension is facilitative leadership (Howze, 2003). Facilitative leadership is a term that describes leaders' behaviors that assist and support positive relationships between employees, 'open communications and expression of ideas, and sharing of resources (Davis, 1968; Hirst et al., 2004). Facilitative leadership also includes leaders ensuring the appropriate platforms, experts, and employees' professional autonomy are in established to permit employees to operate collaboratively with colleagues and other leaders within organizations (O'Connor & White, 2011). In the current study, facilitative leadership is a dimension of the CLS. Hirst et al. (2004) FLS research instrument was used to examine the extent employees' perceive leaders' facilitate collaboration and collegiality within the organization.

Incompetent leader. An incompetent leader is a person in authority who cannot perform their duties as expected (Peter & Hull, 2011). Additionally, an incompetent leader is a person in authority who is responsible for failure on a single project or entire organizational mission (Steven & Shafritz, 1994).

Ineffective leaders. Ciulla (2006) explained that ineffective leaders are unsupportive and provide little to no structure in the effort of achieving the organizational

goals. Moreover, ineffective leaders' followers are unsatisfied and lack commitment to the organization (Yukl, 2012).

Leader. For the purposes of this research, leaders represent the term organizational leaders, which are the leaders of organizations (Lawrence, 1984). Organizational leader is defined as an individual who distinguishes themselves from the team, as the individual that influences others to sacrifice their own personal dreams and work towards an organized group goal (Hogan, 1994; Stogdill & Shartle, 1948). An organizational leader is a person who influences employees to pursue a common goal (George & Sims, 2007; Stogdill & Shartle, 1948). An organizational leader is the individual responsible for the achievement of the organizational specific goals (Halpin, 1956). There can be more than one organizational leader working towards multiple goals (Jago, 1982). An organizational leader is also the individual that executes the leadership process (Lawrence, 1984).

Leadership. Leadership is an evolving process that focuses on visions, thoughts, planning, goals, and coordinating and motivating the actions and tasks of individuals rather than providing directions (Bennis, 2009; Jago, 1982; Stogdill & Shartle, 1948). Leadership is about relationships, credibility, and actions (Kouzes & Posner, 2008). Leadership is a perceptible role that solely occurs as relationships and in the viewpoint of the individuals involved (Bolman & Deal, 2008). According to Lawrence (1984), leadership is a complex skill, which consists of reasoning and inspirational behaviors. Bolman and Deal (2008) further explained leadership is a process of shared power combining beliefs, emotions, and actions.

Leadership style. Northouse (2010) defined leadership style as describing behaviors, actions, tasks and relations, which leaders demonstrate towards others. Leadership style is a pattern of combined behaviors and interactions leaders demonstrate towards others (Jago, 1982); and interpersonal skills and communication methods leaders frequently utilize (Lawrence, 1984). Leadership style, describes the approach leaders typically display when interacting with employees (Bahreinian, Ahi, & Soltani, 2012).

Organizational commitment. Mowday et al. (1979) characterization of organizational commitment is founded on commitment behaviors. Organizational commitment is demonstrated when employees choose to stay and forego leaving the organization as well as choose to association themselves with the organization (Mowday et al., 1979). In the current study, organizational commitment is a criterion variable that was measured with the Organizational Commitment Scale (OCS) developed Marsden et al. (1993). The OCS measured employee overall organizational commitment (Marsden et al., 1993).

Summary

This chapter presented information about the three dimensions collegiality, distributed power, and facilitative leadership of the CLS and how they relate to employee satisfaction and organizational commitment in academic cultures. Effective collegial leadership includes team autonomy, individual responsibility, employee participation, results being more important than process, employees being professional and requiring no supervision, leaders being elected, active peer evaluation, leaders facilitating employee activities, openness and knowledge being considered valuable, and supportiveness and collaboration being valued more than obedience all, of which can have a significant effect

on employee satisfaction and organizational commitment (Adhikari, 2010; Howze, 2003). The general problem was that federal employee satisfaction ratings of their leadership and workplace decreased to its lowest levels government-wide, since 2003 (PPC, 2012). For three consecutive years, federal employees' satisfaction and commitment declined to 57.8% (PPC, 2013). The specific problem was that before suggestions to promote the CLS to foster employee satisfaction in federal agencies can be promulgated an understanding of the relationship between the CLS dimensions of collegiality, facilitative leadership, and distributed power, employee satisfaction, and organizational commitment within federal agencies was required.

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies. The quantitative method was appropriate for the current study because the relationship of the CLS dimensions collegiality, facilitative leadership, and distributed power (predictor variables) on employee satisfaction and organizational commitment (criterion variables) was examined among federal employees to verify the stated hypotheses (Castellan, 2010). Data were collected using five already published and validated assessment tools combined into one study questionnaire that was administered via the Internet-hosting site, Survey Monkey. Upon completion of the data collection process, resulting data were imported into IBM Software Package for the Social Sciences (SPSS) statistical software version 22 and analyzed through descriptive statistics and inferential statistics.

This study is significant because ineffective leadership within the federal government equates to billions of dollars in avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012). The results of the study may benefit future researchers, as well as enhance federal government employees and leaders. As employees' perceptions and behaviors are highly affected by the behavior of the organizational leaders (Porter et al., 1974; Sabir et al., 2011; Secretan, 2005); leaders' behaviors must be addressed in strategies for improving employee satisfaction and organizational commitment (PPC, 2013). The findings from this study may also provide federal government leaders with an enhanced understanding of the CLS influence on employee satisfaction and organizational commitment within other populations (Giffords, 2009; Singh, 2013). Moreover, this study focused on the CLS in a federal culture may lead to strategies to augment effective leadership, which may in turn increase federal employee satisfaction ratings (PPC, 2013).

Chapter 2: Brief Review of the Literature

The general problem was that federal employee satisfaction ratings of their leadership and workplace decreased to its lowest levels government-wide, since 2003 (PPC, 2012). For three consecutive years, federal employees' satisfaction and commitment declined to 57.8% (PPC, 2013). Researchers have shown that employees of ineffective leaders are unsatisfied and lack commitment (Brollier, 1985; Dobbins & Russell, 1986; Lakshman, 2008; Yukl, 2012). Based on research of federal government employees, the number one reason an individual left their job was due to their respective organizational leadership (GAO, 2012). The federal government's ineffective leadership equated to billions of avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012).

Researchers studying strategies to promote effective leadership behaviors have demonstrated a relationship between the dimensions collegiality, facilitative leadership, and distributed power of the CLS, employee satisfaction, and organizational commitment in various organizational cultures (Adhikari, 2010; Howze, 2003; Shrifian, 2011). The CLS has been shown to be essential for positively fostering academic cultures and influencing academic employees (Bolin, 2000; Christopher, 2012; Singh, 2013; Shrifian, 2011); and Adhikari (2010) found the CLS increases organizational effectiveness in hotels and restaurants. However, generalization of previous research findings to federal agencies was prohibited because of differences in organizational structures, taxpayers as stakeholders, public service-oriented missions, and funding methodology of federal agencies (Shah, 2011). Researchers suggested that information was needed to provide an

enhanced understanding of the CLS influences on employee satisfaction (Naidoo, Muthukrishna, & Hobden, 2012); and organizational commitment within other populations (Giffords, 2009; Singh, 2013). Accordingly, the purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment in employees working in federal agencies.

Documentation

To gain an understanding of CLS and how it affects employees satisfaction and organizational commitment, a literature review was conducted using the EBSCOhost, and ProQuest library databases. The following search terms were included: collegiality, collegial leaders, collegial leadership, collegial management, distributed leadership, distributed power, and facilitative leadership. The brief literature review is organized into the following sections: (a) views about leadership; (b) leadership styles; (c) organizational leaders' impacts on employees (d) the CLS; and (d) federal government employees and leadership.

Views about Leadership

A common definition of leadership refers to an individuals' ability for, or their process of influencing others in the obtainment of common goals (Ciulla, 2006; Northouse, 2010; Yukl, 2012). Leadership is a perceptible role that solely occurs as relationships and in the viewpoint of the individuals involved (Bolman & Deal, 2008). Leadership is about how organizational leaders (leaders of organizations) affect followers. Kouzes and Posner (2008) described leadership as being about organizational leaders' ability to build relationships, their perceived credibility, and the various activities

and actions organizational leaders pursue. Leadership is also about organizational leaders' visions and principles and is about how organizational leaders motivate employees to embrace the visions and principles as their own (Bennis, 2009). Sumner-Armstrong et al. (2008) stated that leadership is an aspect of organizational and employee productivity, effectiveness, commitment, and satisfaction. According to Lawrence (1984), leadership is a complex skill, which consists of reasoning and inspirational behaviors. Leadership is the framework of how organizational leaders provide inspiration and motivation to employees in the completion of tasks and goals (Bennis, 2009). According to Kouzes and Posner (2008), leadership includes the actions, activities, and behaviors or organizational leaders display towards others (Northouse, 2010); and it can also include the beliefs and philosophies of colleagues, employees, and customers in their vision and daily operational activities. Bolman and Deal (2008) further explained leadership is a process of shared power combining beliefs, emotions, and actions.

The distinct leadership philosophies and behaviors of organizational leaders can influence the perception of employees and ultimately the effectiveness of organizations (Ciulla, 2006; Northouse, 2010). Sumner-Armstrong et al. (2008) investigated the impacts of organizational leaders lacking a large repertoire of behaviors in order to identify effective leadership for various circumstances. Sumner-Armstrong et al. employed a qualitative approach and conducted semi-structured interviews to collect data from 20 organizational leaders in randomly selected businesses in Australia. Sumner-Armstrong et al. found that behavioral traits were correlated with organizational leaders' ability to recognize employees' desires and to adjust behaviors based on the specific circumstances and that leadership lacking a large repertoire of behaviors showed a lack of

confidence and requisite skills. Sumner-Armstrong et al. also found other factors such as education level and organizational size may impact leaders' behavioral flexibility; which was shown to influence the performance of the organization. Sumner-Armstrong et al. concluded that exchanges between organizational leaders and employees may facilitate positive relationships and organizational effectiveness. Additionally, leadership was shown to be a critical aspect of organizational performance and effectiveness, as well as employee attitude (Sumner-Armstrong et al., 2008). Because the research was conducted in Australia with corporate participants the results may not be generalized to the US population at large or the federal government workforce and more research in these populations is needed (Joaquín & Park, 2013).

Leadership Style

Leadership style is defined by the behaviors, actions, and activities organizational leaders display when assisting organizations in reaching stated goals, through two different concerns tasks and people (Northouse, 2010). Bahreinian et al. (2012) defined leadership style as the way in-which organizational leaders typically interact with their employees. Northouse (2010) defined leadership style as describing behaviors, actions, tasks and relations, which organizational leaders demonstrate towards others. Leadership style also includes factors such as organizational leaders' social skills, social intelligence, communication skills, and ethical principal (Sumner-Armstrong et al., 2008). There are several different types of leadership styles identified in the literature, including collegial, path-goal, transformational, transactional, facilitative, relationship-oriented, and task-oriented.

The various features, behaviors, and activities of organizational leaders as well as organizational leaders' leadership styles have been examined in combination in order to assess, which are most effective and in what situations they are most effective (Yukl, 2012); however, researchers disagree about style superiority and nuances about each style. Metcalf and Benn (2013) found path-goal leaders offer encouragement and rewards for achievement as a method to increase employee productivity. Jens (2011) found that the transformational leadership style is more effective when leading a gender diverse work group. Task-oriented leadership style behaviors were found to be unpredictable as it related to employee satisfaction (Casimir & Yong Ngee, 2010). Mujtaba and Balboa concluded the use of a relationship-oriented leadership style may generate a positive work environment, which will create a more productive and driven workforce (Mujtaba & Balboa, 2009). Used separately and collectively, task-oriented and relationship-oriented leadership' styles can provide the inspiration and motivation needed for employees to be productive and content in the workplace (Northouse, 2010).

Research has indicated organizational leaders' demonstrated leadership styles can be impacted by factors such as culture, as it relates to how organizational leaders interact with others (Jogulu, 2010). Jogulu (2010) attempted to determine if leadership styles are culturally-linked and/or culturally-biased. A total of 324 middle managers 191 from Malaysia and 133 from Australia received broad definitions of the role and responsibility of middle managers and completed the Multifactor Leadership Questionnaire (MLQ). The results showed a significant difference between the Malaysian males' and females' leadership styles and cultural groups. Jogulu found greater cultural equality in Australia as the Australians' viewed leader-employee relationship co-responsibilities. In Malaysia,

Jogulu found a high importance placed on power and status with employees accepting all direction provided by organizational leaders without questions or challenging. Malaysian organizational leaders demonstrated better alignment with the transactional leadership style characteristics, while the Australian organizational leaders aligned better with the transformational leadership style characteristics. Additionally, the Malaysian participants demonstrated a weaker correlation with freedom and autonomy than Australian participants. Jogulu (2010) concluded the findings supported the argument that culture and organizational leaders' interact in different ways in diverse contexts; and workforce diversity and attention to other cultures can enhance employee productively. Because Jogulu conducted the study in Malaysia and Australia with corporate organizational participants, the results may not be generalized to the US federal government employee population and more research is needed with this population (Joaquín & Park, 2013).

Other leadership style characteristics have been addressed in recent literature. Ali, Nisar, and Raza (2011) examined five personality traits extraversion, neuroticism, openness, agreeableness, and conscientiousness, as factors that significantly impact teacher's leadership styles. Ali et al. used a quantitative design and had 228 male and female public elementary and high schools teachers from the Lahore area in Pakistan complete a study survey. The survey included a five-point Likert-type scale to measure extraversion, neuroticism, openness, agreeableness and conscientiousness and their influences on teachers. Ali et al. used the principal factor matrix to extract 10 items related to people-oriented and 13 items related to task-oriented leadership style. Individuals who scored high for both people and task oriented leadership styles were rated as better organizational leaders (Ali et al., 2011). Ali et al. concluded individual

personality traits influenced leaders' behaviors and their leadership styles. Because Ali et al. conducted their study in Pakistan with academic participants the results may not be generalized to the US federal employee population.

Researchers have also found that the leadership style leaders' display is important to the organizational effectiveness and organizational commitment. Devos and Bouckennooghe (2009) conducted a case study to evaluate the roles of school principals, the principals' leadership behavior, and how each construct contributes to the schools' culture. Devos and Bouckennooghe randomly selected 56 principals from a total sample size of 2,310 school principals. A total of 46 school principals participated in the study (Devos & Bouckennooghe, 2009). The results indicated variations in leadership style influenced activities within an organization such as the culture, collegial relationships, employee innovation, respectful collaboration, and unity amongst colleagues. Organizational leaders who were more person-oriented, encouraged professional development, encouraged collegial participation, and tended to enjoy their role as leaders (Devos & Bouckennooghe, 2009). In addition, those organizational leaders were more supportive, tended to initiate structure, and placed a high value on mentoring others. Based on the results, Devos and Bouckennooghe concluded there were three different types of school leadership: person-oriented, task-oriented, a mixture of the two. Additionally, organizational leaders' self-assessment of their leadership role is an important aspect in developing and improving organizational commitment and employee morale, as it influenced organizational leaders' actions with others. The main limitations of Devos and Bouckennooghe's research are that it did not focus on the CLS and the study population was restricted to academia.

In addition, to conducting their own research, some researchers have examined existing literature to investigate leadership style. For example, Lakshman (2008) examined previous research from both qualitative and quantitative studies to identify employees' perceptions of leadership performance, behaviors, and information processes, with the aim of developing a positive and functional leadership behavioral model. Lakshman found that a functional model of positive behaviors consist of examining many factors, information, and data before making decisions and are strengths for effective organizational leadership. Additionally, Lakshman found positive leadership behaviors that were based on employees' perspectives. Based on the results, Lakshman concluded that: (a) effective organizational leaders most often assess many views before reaching a final conclusion, and (b) organizational leaders who display interactive behaviors along with strategic development are essential to organizational effectiveness. The meta-analysis in Lakshman's study served as the research method; therefore, the population did not specifically consider federal agencies and research is needed in this population as federal employee satisfaction ratings of their leadership and workplace have decreased to their lowest levels government-wide, since 2003 (PPC, 2012); and information is needed to inform stakeholders (Joaquín & Park, 2013).

Organizational Leaders' Impact on Employees

The actions of organizational leaders can have a positive or adverse impact on the workforce, organizational culture, and organizational effectiveness (Northouse, 2010). Organizational leaders' behaviors are circulated throughout the organization, which affects the organizational culture (culture of an organization), employee satisfaction, and organizational commitment (Loo, 2006). Organizational leaders conduct and

demonstrated principles of ethical leadership (organizational leaders' ethical behaviors) have been found to build high levels of trust with employees (Caldwell et al., 2010). Organizational leaders' tones as well as words influence employees' perception and mood (Kouzes & Posner, 2008). Casimir and Yong Ngee (2010) found organizational leaders' behaviors that are perceived as socio-emotional positively influence employee satisfaction. Jehn et al. (2008) determined actively engaged organizational leaders can positively affect employees and organizational success. Organizational leaders who demonstrated relationship-oriented leadership style behaviors tended to provide employees with emotional support; thereby, generating high levels of leader-employee collaboration (Mujtaba & Balboa, 2009). Balyer (2012) concluded that organizational leaders who demonstrate transformational leadership behaviors, such as influence, encouraging inspiration, personalized consideration, and intellectual stimulus are positive and effective for gaining employee commitment; generating enhanced performance; and increasing employee satisfaction.

Some researchers would agree that organizational leaders' behaviors affect employees. Hamlin and Patel (2012) examined concerns regarding the various behaviors of effective and ineffective leaders. Due to the changes in organizational leadership focus, leaders are now required to possess different and new competencies (Hamlin & Patel, 2012). Hamlin and Patel noted that there has been minimal research conducted about leadership effectiveness in the health sector, so the purpose of their study was to replicate one previous study on perceived leadership effectiveness within a Romanian public sector hospital to determine the similarities and differences of a previous study within British hospitals. Using a three-step process, Hamlin and Patel collected critical

incidents of effective and ineffective leadership behaviors by employing Flanagan's critical incident technique. A content analysis was conducted to identify behavior categories. Employing a qualitative design, additional data were collected from 36 participants in Romanian hospitals. All the data were evaluated against the previous British research data sets. A total of 57 leadership behaviors were discovered, of which 52% were identified as effective leadership behaviors, and 48% were considered ineffective leadership behaviors (Hamlin & Patel, 2012). A high degree of similarity between the Romanian leadership behaviors and British leadership behaviors was also detected (Hamlin & Patel, 2012). Hamlin and Patel concluded that when considering organizational changes, which may affect employees, organizational leaders must understand and employ behaviors that may be perceived as effective and understand and avoid behaviors employees may perceive as ineffective. Because Hamlin and Patel conducted their study in Romanian hospitals, however, the results may not be generalized to the US federal government employee population and more research is needed (Joaquín & Park, 2013).

Malik (2012) corroborated Hamlin and Patel's findings in an empirical study of the path-goal leadership style. Malik (2012) examined the relationship between leadership actions and employee expectations in a random sample of 200 workers from four cellular companies who completed a 5-point Likert-scale questionnaire related to path-goal leadership style behaviors and employee job expectancies. Situational factors were examined, including employee tasks, employee perceived ambiguity, employee stress, employee lack of autonomy, employee desire to achieve, and employee's self-perception along with the various impacts on employees' job expectations (Malik, 2012).

Employee demographic traits were also examined to determine their impacts on job expectations (Malik, 2012). Malik proposed a model of the path-goal theory, as a visual representation of potential variable connections. Malik found that organizational leaders, who demonstrate directive or participative behaviors, positively impact employees. Factors that affected employee expectation included: task, ambiguity, stress, employee desire for autonomy, self-satisfaction, and management control; employees' personal characteristics did not affect expectations (Malik, 2012). Malik concluded that employees' perception of unjust reward with little differentiation between good performers and poor performers, negatively impacted productivity in higher performing workers. Malik also determined the path goal leadership style and directive leaders are most effective with career-minded employees. More research is needed however, as Malik did not investigate the CLS and Malik's study population consisted of employees in the cellular industry; and it is unclear if the results generalize to federal agency employees.

According to Abigail and Cahn (2011), organizational leaders possess the abilities and power to motivate and control various situations and decisions within the organization. When organizational leaders generate an emotional and significant connection with employees, employees tend to be inspired and motivated (Secretan, 2005). Abigail and Cahn (2011) explained that organizational leaders' power in various situations allows them to influence outcomes, and perceptions. Organizational leaders who demonstrate respect, service, justice, honesty, and community are those that truly possess the power to influence (Northouse, 2010). Secretan (2005) claimed that inspiring and being inspired is the second most important requirement organizational leaders have

for building an effective workforce. Caldwell et al. (2010) noted organizational leaders' abilities and proven experience can create a positive, motivating environment of trust amongst the employees, which influences employees' performance. When organizational leaders demonstrate openhandedness and establish a learning environment (Secretan, 2005); and effective communication of the organizational vision, it can positively impact employees' perception and willingness to exert additional efforts (Conger, 1991).

The relationship between leadership and employees is greatly predicated upon the leader's ability to generate an organizational culture of shared morals and ethical standards (Hood, 2003). The generation of shared values also affects the leadership's capacity for establishing trust amongst the employees (Caldwell et al., 2010). Further, Cartwright (2008) explained that without trust and credibility, other qualities, such as motivation and empowerment of employees, will fail.

Organizational leaders' impact on employee satisfaction. Employee satisfaction is defined as the perceived feelings and opinions that individual have regarding their current employment (Lorber & Skela, 2012; Sakiru et al., 2013; Solberg et al., 2012). The term employee satisfaction describes employees' fulfillment related to the tasks required as part of their employment (Locke, 1995); and employees enjoyment of their work (van den Pol-Grevelink et al., 2012). Locke (1995) also found that employee satisfaction is related to employees' individual principles, values, and self-esteem. According to Lorber and Skela (2012), there are many levels of employee satisfaction including those relating to: work environments, relationships amongst and between colleagues and leaders, salaries, fairness of promotions, job security, responsibilities, and work schedule. Overall employee satisfaction is contingent upon employees' perceptions.

Employee satisfaction is influenced by employees' experiences and interactions with organizational leaders and colleagues within their respective organizations (Locke, 1995; van den Pol-Grevelink et al., 2012). Employee satisfaction is also contingent upon employees' perception of leaders' demonstrated behaviors towards them as well as others (Sakiru et al., 2013).

Sakiru et al. (2013) found that leaders, who demonstrated behaviors related to the transformational and transactional leadership styles, make a positive impact on employee satisfaction. Moreover, employee satisfaction tends to be higher when organizational leaders provide employees with more autonomy and more control (Heponiemi et al., 2014). Researchers found that when organizational leaders considered employees stakeholders (Baldwin, 2008), and encourage employees to collaborate and share the organizational vision, it positively impacts employee satisfaction (Caldwell et al., 2010). In contrast, employee satisfaction has been found to decrease when organizational leaders display behaviors, which employees perceive as negative (Heponiemi et al., 2014).

Many researchers would agree that organizational leaders' behaviors directly impact employee satisfaction. Lorber and Skela (2012) assessed employee satisfaction in nurses and identified factors, which affected their employee satisfaction at 4-hospitals in Slovenia. Lorber and Skela used a quantitative approach, issuing 750 questionnaires with a 5-point Likert-type response scale to nurses in Slovenia. The questionnaire response rate was approximately 68% with 509 questionnaires returned, and with 82% of responses from females (Lorber & Skela, 2012). The results indicated significant differences between leaders' and employees' responses, in 50% of the questions related to job satisfaction. Leaders reported overall significantly higher levels of satisfaction than

employees, as well as greater satisfaction regarding their tasks, management, salaries, current status, professional development, security, work hours, and ability to make decisions (Lorber & Skela, 2012). A positive correlation was found between employee satisfaction and increased levels of education and employee satisfaction and leadership style. In addition, leaders' competencies significantly predicted employee satisfaction. Lorber and Skela concluded that employees with more education are more satisfied with their employment. Lorber and Skela confirmed that leaders' behaviors had a large impact on employee satisfaction and quality of service; that employees' perception of leaders' competencies has a large impact on employee satisfaction (Lorber & Skela, 2012). Some limitations of Lorber and Skela's study were the participant pool was limited to persons in leadership positions, but two different questionnaires were distributed: one for organizational leaders and one for employees; there was little gender diversity as males constituted only 18% of participants; and the questionnaire consisted of 154 questions. A subsequent study that includes a gender diverse population may assist in corroborating Lorber and Skela's findings and provide males with a more proportionate voice in terms of job satisfaction criteria. Moreover, additional research with the use of a validated research instrument with fewer questions may work to replicate Lorber and Skela's findings. Finally, Lorber and Skela conducted their study in Slovenia within a nursing culture; therefore, the results may not be generalized to US populations in general and the federal government employee population in particular.

Employee satisfaction is an important aspect of organizational effectiveness because employees affect the quality of the organizational products and services (Lorber & Skela, 2012). Employee satisfaction has also been found as a major factor in

employees' decision when considering job changes (Locke, 1995). Employees who enjoy their work have been found to have increased employee satisfaction (van den Pol-Grevelink et al., 2012); and Sakiru et al. (2013) found increased productivity, produce higher quality work products, and display a higher degree of confidence. In contrast, organizations with high rates of employee dissatisfaction also experience problems with profitability, slow growth, high levels of customer dissatisfaction, and employee behavioral issues (Ciulla, 2006; Solberg et al., 2012). Northouse (2010) reported that employees who report dissatisfaction promote the cultivation of a negative organizational culture, in-turn negatively impacting organizational commitment. Although employee satisfaction and organizational commitment are related, the two are very distinct (Porter et al., 1974).

Organizational leaders' impact on organizational commitment.

Organizational commitment represents employees' commitment to their respective organization and can be defined many ways. Mowday et al.'s (1979) description of organizational commitment is founded on commitment behaviors. Baldwin (2008) explained once an individual accepts employment within an organization, they are already committed to following the leadership within that organization. Organizational commitment is characterized with employees' demonstration to stay and forego leaving the organization, as well as associating themselves with the organization (Mowday et al., 1979). Porter et al. (1974) also defined organizational commitment as employees' demonstration of participation and the value placed on the achievement of the organizational goals.

Researchers Rupert, Jehn, Engen, and de Reuver (2010) corroborated the Porter et al. (1974) finding when examining how pressure to conform and leadership styles affected the commitment of cultural minorities and majorities within organizations located in the Netherlands. Rupert et al. distributed 280 questionnaires to employees of large multinational organizations and received 109 with 2-discarded due to missing data. The results indicated minorities demonstrated more commitment to the corporation than the majority employees. In addition, the pressure to adapt, along with effective leadership, amplified the level of organizational commitment in minorities. Rupert et al. concluded that organizational leaders should concentrate on increasing leadership effectiveness to increase organizational commitment for all employees and consider the reactions of the majority employees to integration. The main limitations of Rupert et al.'s research are it did not focus on the CLS; and based on the study population, the sample size may not be generalizable to federal employees.

Some researchers also demonstrated that leadership styles of organizational leaders impact employee commitment. Rehman et al. (2012) examined transformational and transactional leadership styles to determine, which generated commitment in Pakistani employees. Using a quantitative approach the researchers distributed 150 questionnaires to employees at various levels within an academic institute in Pakistan. The results indicated both transformational and transactional leadership styles were positively correlated with organizational commitment, with transformational style rating slightly higher. Based on the results Rehman et al. concluded leadership style impacts organizational commitment, and that leading by expectations does not significantly impact organizational commitment; but that organizational leaders actions that motivate

and inspire significantly impact organizational commitment. The main limitations of Rehman et al.'s study were that the participants were limited to academia; and that it did not focus on the CLS.

Researchers who investigate organizational commitment tend to find similar results as it relates to employee perception. Porter et al. (1974) found employees' overall perceptions related to the organization and organizational leaders are important in their decision to remain with an organization; and employees, who have a favorable perception of the organization, tend to remain with their respective organization. Caldwell et al. (2010) claimed that employees' perception of organizational leaders' values influenced employee organizational commitment; and organizational leaders' values perceived as trustworthy and moral were important in the generation of long-term organizational commitment. Organizational commitment is also generated when organizational leaders' are perceived as a facilitator of collaboration and relationships (Boyatzis & McKee, 2006). Additionally, Secretan (2005) found organizational commitment increases when employee perceive organizational leaders as investing in the workforce by being heart lifters, listening to concerns, and creating opportunities.

Some researchers have corroborated Secretan's (2005) findings. Sabir et al. (2011) studied the effects of leadership style on employee organizational commitment, when the values of the organization reflect the employee's value. Sabir et al. found that leadership style is a strong measurement of employees' organizational commitment, when the culture of the organization closely aligns with the values of employees. Sabir et al. identified organizational culture as a major factor in employee motivation and commitment, both of which enhance the effectiveness and performance of the

organization. The meeting of employee expectations increases the commitment level of the employee to the organization (Sabir et al., 2011). When examining transformational and transactional leadership styles Sabir et al. observed the efficiency and effectiveness of the organization depended on the leadership style (Sabir et al., 2011). Sabir et al. concluded that leadership activities that are expressed through the communication of policies, regulations, incentives, and empowerment, along with leaders' ability to construct an organizational culture, which facilitates employee interaction, positively impact organizational commitment.

Organizational leaders' influence on organizational commitment has been an important topic in the organizational literature. In 2012, Basford, Offermann, and Wirtz investigated the relationship between two levels of leadership, first-line supervisors and senior leadership, on employees' organizational commitment. Using a quantitative design, questionnaires were sent to 69,568 employees from 677 large service sector US organizations (Basford et al., 2012). The participant demographic consisted of approximately 54% female and 46% male (Basford et al., 2012). The survey consisted of a 6-point Likert-type response format to measure four areas of employee perspective: organizational commitment, motivation, perceptions of first line supervisor support and perceptions of senior leadership support (Basford et al., 2012). Findings indicated employees' perceptions of their first-line supervisor's support and senior leadership support was statistically significant. In addition, correlational, significant relationships were found between employees perceptions of first-line supervisor support and employees' organizational commitment (Basford et al., 2012). Basford et al. concluded that employees' perception of leaders' levels of support impacts employees' level of

organizational commitment. Basford et al. (2012) indicated the study results may not be generalizable to other organizations, as the study population was from an organization in which leaders demonstrated high levels of supportive and employees felt obligated to raise concerns above their respective supervisor. The study's population also consisted of public sector employees; therefore, the results may not be generalized to the US federal government employee population and more research is needed (Joaquín & Park, 2013).

The Collegial Leadership Style

Among researchers, there is no agreement on a single definition, or description, for the CLS or upon the terminology for describing collegial leadership style behaviors; neither is there a single collegial leadership governance model (Hatfield, 2006; Lazega & Wattebled, 2011). According to Carr (1997), collegial leadership refers to coworkers working collectively to create strategies to improve organizational effectiveness; regardless of whether it is called collegial leadership, distributed leadership, facilitative leadership, collaborative leadership, or collegiality (Singh, 2013, p. 968). Howze (2003) defined collegial leadership with phrases such as:

- team autonomy,
- individual responsibility,
- employee participation,
- results being more important than process,
- employees being professional and requiring no supervision,
- leaders being elected,
- active peer evaluation,
- leaders facilitating employee activities,

- openness and knowledge being considered valuable, and
- supportiveness and collaboration being valued more than obedience.

Hatfield (2006) defined collegial leadership utilizing words such as cooperation, collaboration, compromise, culture, congeniality, social connection, organizational citizenship, sportsmanship, courtesy, and respect. Hatfield (2006) also described collegial leadership as a model for academic structures operating as independent contractors with distributed power. Researchers have suggested there are two primary criteria of the CLS: an organizational structure and management methodology (Lazega & Wattebled, 2011). Notable theoretical and empirical support was found for the paradigm of the CLS or specific aspects of the same as critical components of organizational effectiveness, employee collegiality, employee satisfaction, and organizational commitment, within academic cultures (Busher & Blease, 2000; Howze, 2003; Jarvis, 2012; Shrifian, 2011).

The majority of studies on the CLS or its specific aspects have been conducted within academic cultures (Akert & Martin, 2012; Bagilhole, 2012; Bergman, 2012; Bush & Glover, 2013; Busher & Blease, 2000; Christopher, 2012; Ho, 2010; Husarik & Wynkoop, 1974; Meyer, 2007; Naidoo et al., 2012; O'Connor & White, 2011; Shah & Abualrob, 2012; Shrifian, 2011; Thorpe & Kalischuk, 2003). There has also been some research conducted on the CLS in hospitals (Padgett, 2013; Thorpe & Kalischuk, 2003); hotels and restaurants (Adhikari, 2010); and in a Roman Catholic diocese (Lazega & Wattebled, 2011). Most of the studies conducted on the CLS were qualitative case studies (Shah, 2011).

In spite of all the research on the CLS, some researchers have indicated the CLS is not actually a formal leadership strategy. Jarvis examined the CLS characteristics of

power sharing and organizational structure in academic cultures. A qualitative approach, with semi-structured questions issued to 11 schools and 22 departments in England was undertaken (Jarvis, 2010). Jarvis found the lack of role definition and excess power sharing produced a culture of confusion. Jarvis discovered employees were uncertain of the person meant to be leading the group on many occasions due to the lack of formal structure. Jarvis concluded that the lack of formal leadership created power sharing conflicts, collaboration limitations, and employees made decision by consensus as a method of completing assignments. Jarvis concluded that CLS was not a deliberate leadership strategy in itself, but a characteristic of leadership (Jarvis, 2010). Jarvis conducted the study in academic cultures in England; therefore, the results may not be generalized to the US federal government employee population.

Collegial leadership style in academia. Singh (2013) examined aspects of the CLS within schools, but the researcher suggested that governance structures other than academia can also benefit from the CLS practices. Singh researched distributed power and leader-employee collegiality of the CLS within customary bureaucratic leadership methods within schools. Singh investigated employees' perceptions of leaders' social skills as relating to emotional intelligence, and collegiality, within corporations in South Africa. A quantitative design was used to survey 474 employees from 200 organizations (Singh, 2013). Fifty-five questions were presented within a Likert-type response format, which focused on employee demographics, job satisfaction, and collegial management skills (Singh, 2013). Singh found employee satisfaction and leaders' social skills were correlated and concluded that when organizational leaders demonstrate higher social skills, employees are more likely to experience increased job satisfaction (Singh, 2013).

Distributed power and collegiality, of the CLS are person-centered and can therefore generate increase in employee satisfaction. A limitation of Singh's study is the fact Singh examined distributed power leadership and collegiality of the CLS but did not consider facilitative leadership. In addition, the study population consisted of teachers in South Africa; therefore, the results may not be generalizable to the US federal government workforce.

CLS is characterized within academia by the development of employees, creating a shared vision, as well as knowledge and power sharing (Naidoo et al., 2012; Singh, 2013). When researchers examined academic cultures they have found a connection between CLS behaviors and employees' and organizations' effectiveness (Adhikari, 2010; Freedman, 2012; Shrifian, 2011). Collegial leaders were seen as facilitators that built trust, and bridged gaps between organizational leaders and employees (Freedman, 2012; Shrifian, 2011). Key CLS qualities are: trust, respect, clearly stating values, supportiveness and fostering communication (Freedman, 2012; Naidoo et al., 2012). Shrifian (2011) and Singh (2013) added to this: emotionally supporting followers, flexibility, creating opportunities and influencing collaborations as key CLS behaviors.

Naidoo et al. (2012) conducted a quantitative study designed to investigate CLS behaviors of school principals. A 2-part, 3-point Likert-type response scale surveys were distributed to 50 teachers, of which 22% were males, in 5-schools in South Africa (Naidoo et al., 2012). Naidoo et al. found that female participants are particularly concerned with: (a) communication of goals, (b) professional and personal growth, (c) shared decision making, and (d) recognition of professional skills, as demonstrated by their principal's leadership behaviors within their respective schools. Both genders

indicated leaders' rarely demonstrated collegiality and males in particular stated leaders rarely recognized employees as professionals (Naidoo et al., 2012). Due to the concerns expressed by both genders, Naidoo et al. concluded that the school leaders should focus on generating professional respect by utilizing the transformative leadership styles and distributing power to employees. Some limitations of Naidoo et al.'s research included leaders' perspectives were not examined, and the schools being located in South Africa. Researching a larger population with a more diverse population would be useful.

Although Naidoo et al. utilized effective questions, most of these focused on teachers' collegiality and it was unclear from the data if the teacher perceived there was collegiality among their peers. Naidoo et al.'s population consisted of teachers in an academic culture in South Africa; therefore, the results may not be generalized to federal agency employees.

Shrifian (2011) examined the CLS in an effort to determine organizational impacts. Employing a 2-part questionnaire, Shrifian surveyed 305 teachers in Iran to measure effective organizational behaviors. Approximately 92% of teachers' surveyed held undergraduate degrees or above and 80% had over 11-years of teaching experience (Shrifian, 2011). The results indicated that CLS characteristics of: human relations, team building, and employee flexibility all positively impacted organizational effectiveness. Shrifian also found that the use of CLS behaviors increased employee and organizational effectiveness (Shrifian, 2011). Based on the results, Shrifian's description of the CLS included both organizational structure and a leadership methodology. However, Shrifian's investigation of the CLS did not examine the constructs of employee satisfaction and organizational commitment. Although Shrifian examined the construct of

working groups the term was not operationally defined in terms of the CLS dimension of distributed power. Additionally, Shrifian's study was not conducted in a federal agency or within the US.

Collegial leadership style outside academia. Many recent studies have been conducted in an effort to examine the CLS outside of academic settings. Lazega and Wattebled (2011) examined the CLS using a qualitative approach and collected data from 50 priests and 30 pastors. Adhikari (2010) randomly selected 50 medium and small sized corporations to conduct a qualitative study examining organizational structure and power sharing techniques. Accordingly, the CLS is no-longer vested in the limitations of the educational paradigm (O'Connor & White, 2011).

One setting in which the CLS has been investigated is in hospitality environments. Adhikari (2010) investigated power sharing in hotels and restaurants to determine why CLS behaviors brought organizational leadership and employees together. Utilizing a qualitative approach, 50 organizations were randomly selected within Kolkata, India and Adhikari interviewed one owner and five employees from each corporation. While distributed power is part of the CLS, defining and establishing roles is critical (Adhikari, 2010). Leaders are not required to share in all decision making in order to be seen as effective. Adhikari found certain responsibilities, such as: employee recruitment and benefits and monitoring of employees were retained with business owners, which employees viewed in a positive manner. Furthermore, collegial leaders, who demonstrated compassion, respect, and genuine concern positively impacted employees (Adhikari, 2010). Adhikari also found aspects of leadership that employee viewed as negative. Employees perceived autocratic and democratic leadership behaviors as less

effective and autocratic leaders were perceived as inflexible resulting in increased workplace conflict (Adhikari, 2010). Because Adhikari conducted the study in Kolkata, India the results may not be generalized to the US federal government employee population and more research is needed.

A Roman Catholic diocese in France was investigated to uncover the different definitions of the CLS. Lazega and Wattebled (2011) examined two different meanings of collegiality within a Roman Catholic diocese in France. Lazega and Wattebled utilizing a mixed method approach interviewing 50 priests and 30 pastors. A 3-part questionnaire was completed by 124 priests with 104 returned as complete. Lazega and Wattebled found two types of collegiality: one was a method of bureaucratic management and the other a form of organizational structure. The first form of collegiality was found to be related to employees conducting uncertain and non-routine assignments collaboratively. The results indicated leaders working with the bureaucratic management approach demonstrated collegiality and facilitative leadership by encouraging collegial behavior as well as by encouraging employee collaboration and exchange of information. Employees' activities in this approach are based on relationships and dependencies (Lazega & Wattebled, 2011). In the organizational structure form of collegiality, leaders distribute power to employees and the employees have the authority to make decisions. Employees rely on each other to successfully make complex decisions; thereby, behaving collegially by collaborating and supporting colleagues. Lazega and Wattebled also found committees are formed and a formal leader is chosen for the development and support of organizational policies. Both the collegial organizational structure and bureaucratic management depend on specialization, and employees acting professional when

addressing complex situations (Lazega & Wattebled, 2011). Based on the findings, Lazega and Wattebled concluded that both bureaucracy management and collegial structure may be able to coexist within an expert and professionally workforce. Some limitations of Lazega and Wattebled's research included a small participant pool and the fact the diocese was located in France. Researching a larger population with a more diverse population would be useful. The research population consisted of priests in a Roman Catholic diocese in France; therefore, the results may not be generalized to US federal agency employees.

Collegial leadership style dimensions. Research has also indicated that leaders and employees have different perceptions about the importance of the various dimensions of the CLS. Akert and Martin (2012) examined the CLS's effectiveness in improving schools, and examined the dimensions of distributed power, collegiality and facilitative leadership effectiveness. Akert and Martin employed a quantitative approach with a 4-point Likert-type response scale with questionnaires distributed electronically to 214 teachers, who worked for 15 different principals in Midwest schools, attained a 44% response rate in schools. Akert and Martin found a significant variance in the perceptions of principals and teachers regarding teachers' participation and principals' leadership impact on generating in school improvements. Principals placed greater importance on teachers' power and influence on leadership and influence on school enhancements than teachers themselves (Akert & Martin, 2012). Principals perceived they provide and permit teachers to take active leadership roles, while teachers perceived they were not permitted to be active leaders within the school (Akert & Martin, 2012). Additionally, the results indicated important factors for both teachers and principals were: collegial

behavior, establishment of clear expectations, and collaboration and networking for teachers to lead school improvements. Akert and Martin concluded that both the distributed power and facilitative leadership aspects would increase conversation and participation among and between employees and leaders. In addition, leaders, who utilized both the distributed power and facilitative leadership approach created trust, increased commitment, and motivated performances (Akert & Martin, 2012). The main limitation of Akert and Martin's study was that the survey sample was restricted to teachers and principals in academia. Because Akert and Martin studied an academic culture the results may not be generalized to the US federal government employee population.

In all three dimensions: collegiality, distributed power, and facilitative leadership of the CLS emphasize the importance of collaboration. Collaboration amongst employees is a key factor in the sharing of knowledge across the organization, train employees, and communicate common values and visions (Carr, 1997; Shrifian, 2011). Employees' freedom to collaborate with colleagues is a valuable tool in the enhancement of employee skill, as employees become educators and students when they actively gather and share knowledge, which facilitates learning (Lieberman & Miller, 2011; Mukhtar, 2011; Raelin & Coghlan, 2006; Winters & Alexander, 2011). Employee collaboration increases positive collegial engagement, removes perceived limitations, and raises product quality (Mukhtar, 2011; Raelin & Coghlan, 2006). Shah (2011) contended that the facilitative leadership aspect of collaboration serves as a catalyst in the establishment of professionalism, a collegial organizational culture, and employee capabilities. In contrast, some researchers have concluded that the facilitative leadership can excessively extends

the decision making process (Busher & Blease, 2000; Carr, 1997; Meyer, 2007; O'Connor & White, 2011).

Collegial leadership style dimension of collegiality. In academic cultures, employee collegiality is a standard and expected as part of the organizational culture although the concept is ambiguous (Freedman, 2012). Collegiality has two vastly different definitions (Freedman, 2012); the first refers to the CLS characteristics of distributed power (Bush, 2000; Douglas, & McClelland, 2009; Hammersley-Fletcher & Brundrett, 2008; Freeman, 2012; Thorpe & Kalischuk, 2003); and in American Heritage (2014) collegiality is defined in terms of distributed power, autonomy, and authority divested to employees.

The second definition of collegiality is part of the social behavior theory, which explains social constructs as related to organizational culture, friendliness, and social connection (Hatfield, 2006). Collegiality may also be defined as “the cooperative relationship of colleagues” (Collegiality.2014.In Merriam-Webster.com), and as linked to the organizational citizenship behaviors of sportsmanship, supportiveness, courtesy, and being quick to offer assistance to others (Freedman, 2012; Hatfield, 2006; Watt, 2005). Collegiality refers to the extra tasks or activities employees undertake, which are beyond the requirements of their job, including, organizing worker morale events and team lunches, and assisting others with assignments (Katz & Kahn, 1978). Collegiality encompasses the values of trust, friendliness, and fairness (Dubrow, 2004; Watt, 2005).

Some researchers have found collegiality to be vital to employee collaboration, confidence, and forging relationships. Loeffler, Ely, and Flaherty (2010) examined employees' perception of collegiality amongst colleagues and leaders, as it relates to

work-life balance for parents. Loeffler et al. used a quantitative design and sent questionnaires to all 405 faculty members at a university in the US with 119 meeting the inclusion criteria of having at least one child. The participant demographic consisted of approximately 64% male and 76% Caucasian (Loeffler et al., 2010). Loeffler et al. employed a 6-point Likert-type response format survey to measure employee's perceptions of their colleagues' support for parents work-life balance. The results indicated men reported receiving greater collegial support from colleagues for parents' work-life balancing; men had greater confidence in their ability to receive tenure; but both genders report receiving similar good collegial support from leaders for parents' work-life balancing. Based on the results Loeffler et al. concluded it was critical for employees, who are parents to receive support from colleagues; also, that the lack of collegial support from leaders as well as colleagues may decrease employees' confidants, decrease collaboration, and decrease employee collegiality. The main limitations of Loeffler et al.'s research are it did not focus on the CLS and its impact on employee satisfaction or organizational commitment; that the study population was restricted to academia; only a single indicator of collegiality was examined; and that the participants were 76% Caucasian.

Additionally, researchers have found the CLS dimension collegiality may be effective in generating organizational commitment. Dipaola and Guy (2009) examined organizational justice to determine if it is related the school climate. Dipaola and Guy utilized a quantitative approach distributing a Likert-type scale questionnaire to 36 high school faculty members; the total sample size was 1218 participants. The results indicated a significant and positive relationship between equality and collegial leadership;

collegial leaders should demonstrate supportiveness and openness; and collegial leaders should be concerned about employees' perceptions of fairness. Dipaola and Guy concluded that collegial leadership can positively impact teachers' ability to trust their leaders; and that teachers will demonstrate less collegiality when employees' perceived that leaders are acting unjustly. If leaders attempt to control teachers' activities this discourages teachers from extending their activities beyond minimal requirements (Dipaola & Guy, 2009). Dipaola and Guy suggested leaders must create a collegial relationship by collaborating in the area of organizational expectations and goals; teachers are more inclined to commit and support the organizations goals when they share in organizational decision-making. Additionally, leaders should gather information, avoid bias, and gain an understanding of teachers' perspectives before making final organizational decisions as a method to generate commitment (Dipaola & Guy, 2009). The main limitations of Dipaola and Guy's research are that it did not focus on the CLS dimensions of facilitative leadership, or distributed power; and that the study population was restricted to teachers.

Some research indicated fostering employee collegiality is a critical aspect in the successful management of academic institutes' tasks and goals (Brundrett, 1998). Employee collegiality is also fundamental for cultivating positive organizational cultures and employee morale (Hatfield, 2006; Katz & Kahn, 1978; Watt, 2005). Collegiality among employees offers benefits, which include increased employee satisfaction and organizational commitment (Brundrett, 1998; Hatfield, 2006). In contrast, perfect employee collegiality may not be pragmatic as it relates to collaboration and cooperation between employees (Brundrett, 1998). Mandatory employee collegiality policies are

redundant, risk homogeneity, reduce employee collaboration, and restrict employee autonomy by isolating employees, who do not conform, or who go against group norms (Fischer, 2009). When leaders include collegiality as part of employee evaluation, employees can perceive it as a method of discrimination (Haag, 2005).

However some researchers do not corroborate Haag (2005) findings. Nelson, Caldarella, Adams, & Shatzer (2013) found a method to increase employee collegiality is peer evaluation and interaction. Nelson et al. employed a quantitative approach and utilized a Likert-scale type questionnaire to examine teachers' perceptions of school collegiality. The participants were 70 teachers from two schools; demographics consisted of approximately 64% females and 84% Caucasian (Nelson et al., 2013). Nelson et al. found teachers perceptions of collegiality and school community significantly increased after a peer praise intervention. Thus, Nelson et al. concluded peer praise interventions may be of value for employees to build new relationships and a sense of community. The main limitations of Nelson et al.'s study were that the survey sample was restricted to teachers in an academic culture and that the population was predominantly Caucasian females.

To assist leaders in evaluating the collegiality of employees researchers have developed a teacher collegiality scale. Shah (2011) created such a scale based on a literature review. Collegiality was defined within seven dimensions: mutual trust; observing colleagues; collaborative planning; sharing of knowledge; mentoring of colleagues; collaborative curriculum development; and sharing of resources (Shah, 2011). The 66-item Likert-style response questionnaire was administered over a four month period to 23 same-sex schools in Pakistan (students are separated by gender in all

Pakistani schools); 118 teachers took part, of which 62% were males (Shah, 2011). Based on initial responses, Shah removed 6-questions; and then distributed the second questionnaire to 364 school teachers in 17 randomly selected schools with a 64% male response rate. Shah found 7-employee collegial behaviors that describe collegiality as demonstrated in Pakistani schools. Shah concluded that collegiality involves displaying support and trust, mentoring, observing activities, and collaborating on plans, as well as sharing expertise and resources (Shah, 2011). The limitations of Shah's study include the lack of diversity and that it can only be generalized to other academia institutions within similar cultures. Conducting additional research within a nonacademic population and with a larger and more diverse sample may duplicate Shah's findings, and provide further support for the use of the CLS. Shah's operational definition of collaborative curriculum development of the CLS may not be applicable in most federal agencies.

Hatfield (2006) studied collegiality to gain a better understanding of the variables involved, as well as to define the term. Using a qualitative method, a literature review was conducted to define collegiality from the aspect of status and behaviors (Hatfield, 2006). Hatfield found collegiality is a factor included in many academic institutes' policies for employee promotion and field identified its three principal dimensions: leadership styles, social factors of the organizational culture, and organizational citizenship. Hatfield found collegiality as a dimension of the CLS. Collegiality has two aspects: first consisting of leaders' ability to cooperate, collaborate, and compromise; and employees who are collegial assist in the generation of positive and functional relationships between others an important component for collegial leaders in successfully accomplishing organizational goals (Hatfield, 2006). When positive collaboration and

cooperation exist among employees, continuous growth and sharing within the organizational culture exist (Hatfield, 2006). Mutual respect was also identified as an important aspect of employee collegiality, along with social factors such as congeniality and social connection (Hatfield, 2006). Finally, the dimension collegiality includes organizational citizenship, which is comprised of civic virtue, sportsmanship, courtesy, and respect (Hatfield, 2006). Similar to Brundrett's (1998) findings, Hatfield found when employees display a lack of collegiality it can result in stress, lack of professionalism, dissatisfaction, segregation, and increased conflict (Hatfield, 2006). Because Hatfield conducted a literature review, which analyzed the outcomes of past research the results may not be generalized to the US federal government employee population.

Freedman (2012) examined the manifestation of collegiality amongst librarians in the Massachusetts State College Association (MSCA) using a quantitative approach. Freedman derived 7-questions for the librarians, regarding attitude and perceptions, as it related to the work environment and interdepartmental collegiality issues; and 55 librarians completed the survey, of which 23% were females. Freedman found that working in a collegial environment was an important aspect for employees. Collegiality or the lack of collegiality has effects on how employees function within organizations and on employees' motivation. Freedman concluded collegiality should be defined in terms of: the autonomy of the professional, treating colleagues fairly and with respect, shared power, sharing of knowledge, and avoidance of conflict. The study was conducted with librarians as participants and did not investigate the impacts of the CLS on employee satisfaction nor organizational commitment. Freedman conducted the study solely

amongst with librarians, operating in an academic culture; therefore, the results may not be generalized to the US federal government employee population.

Van Maele and Van Houtte (2011) found similar results when studying the CLS dimension of collegiality, organizations structure, and culture, and its effects on trust in colleagues. Van Maele and Van Houtte employed a quantitative approach and distributed surveys within 84 schools to 2,104 teachers in Belgium over a two year timespan. Van Maele and Van Houtte found trust is more likely to develop when teachers have similar views; and specific features of governance, within schools accounted for the substantial differences in trust among colleagues. Van Maele and Van Houtte (2011) concluded that the development of positive school guidelines, similar to employees' values, would increase collegiality, productivity, and foster trust amongst colleagues. Van Maele and Van Houtte did not focus on the CLS dimensions of distributed power or facilitative leadership and limited the study to schools in Belgium; therefore, cannot be generalized to US federal agencies.

Other researchers that investigated the dimension of collegiality found as a negative aspect not clearly articulating collegiality expectations. Balsmeyer et al. (1996) employed a 2-phased mix method approach in their study. In phase one Balsmeyer et al. distributed a survey with open-ended questions to nurses to help define behaviors consistent with the dimension collegiality. In phase two, Balsmeyer et al. distributed a 5-point Liker-scale questionnaire to university faculty to assess the importance of collegiality behaviors as part of its daily performance. Balsmeyer et al. found that the behaviors of collegiality included:

- cooperation on activities,

- completing assignments,
- accepting responsibility for an equal amount of work,
- providing mentoring and assistance to colleagues,
- respect for others thoughts and ideas,
- sharing of resources,
- being open to new opinions,
- professional conduct, and
- fair treatment and lack of bias

Balsmeyer et al. also identified indicators of collegiality behavior, such as collaboration, professionalism, and respect as vital to the performance of organizational effectiveness. Based on the findings Balsmeyer et al. concluded the lack of standardization of collegiality increases employee ambiguity, and decreases employees' willingness to mentor junior employees. The main limitations of the research are that it did not focus on the dimensions of distributed power or facilitative leadership of the CLS and it did not include the constructs employee satisfaction and organizational commitment. The study was also restricted to academia.

However, recently, researchers have investigated various CLS behaviors, such as collaboration, distributed power, respect, and knowledge sharing (Adhikari, 2010; Akert & Martin, 2012; Freedman, 2012; Ho, 2010; Jarvis, 2012; Thorpe & Kalischuk, 2003). Various CLS behaviors such as collegiality, distributed power, facilitative leadership have been determined as critical aspects for organizational effectiveness (Freedman, 2012; Shrifian, 2011; Singh, 2013). Shrifian (2011) found that rather than the providing

of instructions the CLS behaviors of supportiveness and facilitation were vital to organizational success.

Collegial leadership style dimension distributed power. The CLS involves empowering employees through some form of power sharing also found in the literature as distributed power (Adhikari, 2010; Freedman, 2012; Naidoo et al., 2012; Shrifian, 2011; Singh, 2013). Some researchers found that when leaders distribute power they must maintain positional power while performing the critical role of formal decision maker (Adhikari, 2010; O'Connor & White, 2011). Distributed power is associated with both the sharing of power and the domination of one individual another (Bush & Glover, 2012; Meyer, 2007; Wilmot & Hocker, 2011). Distributed power often occurs between colleagues, roommates, and spouses (Wilmot & Hocker, 2011); when it is provided by an individual with designated power, or when one individual insists on attaining their objective, despite another individual challenging the decision (Howze, 2003; Thorpe & Kalischuk, 2003; Wilmot & Hocker, 2011; Yokoyama, 2006). Distributed power transpires with the infliction of one's desires upon the conduct of other individuals (Agusti-Panareda, 2004). In complex organizations, the structure may provide for various effective forms of power sharing, when clearly delineated roles and responsibilities are provided to employees (Jarvis, 2012; Adhikari, 2010). To successfully distribute power leaders must ensure the organizational culture is a safe environment for employees to freely communicate any issues or concerns (Adhikari, 2010; O'Connor & White, 2011). Researchers have found distributed power can be employed in an organization as a method to transform traditional bureaucratic organizations (Adhikari, 2010; Jarvis, 2012; Shrifian, 2011; Singh, 2013). Another aspect of distributed power is for leaders to

collaborate with employees, prior to formally reaching an obligatory decision, to ensure every employees opinions and thoughts are considered in the decision making process (Freedman, 2012; Jarvis, 2012; Shrifian, 2011; Singh, 2013). Not only are the opinions of employees considered, but leaders also provided trusted employees with the autonomy to make decisions (Jarvis, 2012; Naidoo et al., 2012). Jarvis (2012) and Singh (2013) explained that when leaders distribute power to employees they are no longer the authoritative figures that execute regulation without collaborating and considering the ideas and perspectives of employees.

Researchers have found that with the CLS dimension distributed power along with employee collaboration, leaders can retain final decision authority. Mitchell (2010) examined leadership of presidential foreign policy development, the impact of varying leadership styles, and how the created policy is perceived. Specifically, the researcher examined President Bill Clinton's leadership style and decision making process. Mitchell found very little change in President Clinton's leadership style during his presidency, but key differences in the resulting conclusions, and circumstantial factors. Mitchell found President Clinton: employed the CLS when crafting policies; encouraged collegial interaction; implemented committees with representation from all parties; allowed others to craft some policy; only interjected his opinion in the final decision; and created a safe environment for all individuals to communicate differing opinions. Based on the results Mitchell concluded that leaders need not interject in decisions that are considered routine, but in that are exceptional or emergent; and leadership styles should not only include individual traits and abilities, but also a framework for making decisions. When leaders utilized the CLS they can create an environment, in which external factors can influence

issues: when external factors resist change this can negatively impact, by making it difficult for leaders to resolve and overcome differences; and external factors can positively influence by exerting pressure to assist in resolving deadlock and meaningless consensus by altering the balance of power. The main limitations of Mitchell's study are it did not focus on the CLS dimensions facilitative leadership or collegiality; and the study population was restricted to a single person.

The CLS aspect of distributed power allows for employees to make decisions by providing employees with autonomy and the leaders fostering collaboration, cooperation, professionalism, and equality (Howze, 2003; Thorpe & Kalischuk, 2003; Yokoyama, 2006). The distributed power dimension of the CLS allows for employees' professional autonomy through mutual trust and minimal hierarchical oversight (Bush & Glover, 2012). Collegial leaders distribute power among employees demonstrating trust of employees to behave and make decisions in a professional manner (Kok et al., 2009; Shrifian, 2011). Distributed power within organizations often generates the necessity of subject-matter experts to actively collaborate, cooperate, and commit to working with others (Lazega & Wattedled, 2011; Yokoyama, 2006). As part of distributed power, collegial leaders trust in their employees is crucial, as it facilitates working collaboratively in the decision making process (Cosner, 2009). However, collegial leaders must maintain positional power when performing the critical role of official decision makers to ensure effectiveness and reduce redundancies (Adhikari, 2010; Jarvis, 2012; O'Connor & White, 2011). The distributed power process allows for all employees' opinions to be considered as part of the organizational decision making processes

(Freedman, 2012; Shrifian, 2011). Meyer (2007) found there are significant negative impacts when leaders excluded employees from the decision making processes.

Within organizations, however, distributed power involves the sharing of leaders' roles and responsibilities (Shrifian, 2011). Distributed power occurs when leaders bestow employees with power, particularly beyond a formal leadership position (Bush & Glover, 2012). Distributed power is an aspect of the shared power leadership model, which has demonstrated benefits including the reduction in team conflict within organizations; and organizations with distributed power typically have an increase in consensus, quality, and group trust (Bergman, 2012; Ho, 2010). Distributed power also includes the autonomy of employees to make decisions and is an essential component to organizational effectiveness, employee collegiality, and quality products (Kok et al., 2009; Kouzes & Posner, 2008; Shrifian, 2011). In investigating the advantages of shared power, Hoogervorst, Niek, De Cremera, Van Dijkea, and Mayer (2012) found providing employees with a sense of belonging through distributing power facilitated their willingness to self-sacrifice time and efforts to ensure organizational effectiveness. The involvement of employees is critical to organizational effectiveness, as Meyer (2007) discovered distributed power requires employee participation as part of the decision making process to maintain confidence in the organizational leadership.

Other researchers have corroborated Meyer (2007) findings as they found the CLS dimension distributed power when transparent to employees and planned may have a positive impact on employee collegiality. Mascall, Leithwood, Straus, and Sacks (2008) investigated the relationship between four patterns of distributed power and a modified version of Hoy et al. survey entitled, academic optimism. Mascall et al. employed a

mixed-method approach over a 3-year time span and distributed 2-surveys to schools in Ontario receiving 1,640 responses. Mascall et al. found that academic optimism was positively and significantly correlated with leaders' prearranged approaches to distributed power; negatively and significantly correlated with spontaneous approaches to distributed power; and that spontaneous approaches to distributed power negatively impact employees trust in leaders. Mascall et al. concluded that when leaders distributed power transparently and in a planned manner employees are less likely to scrutinize or communicate concerns. It was also concluded employees' optimism, collegial engagement with colleagues and productivity will increase when leaders distribute power; therefore, leaders should distribute power in an open manner. The main limitations of Mascall et al.'s study are it did not focus on the CLS dimensions facilitative leadership or collegiality; and the study population was restricted to an academia.

Researchers have also found the CLS dimensions collegiality and distributed power, can increase employee knowledge and collaboration. Margolin (2008) conducted a qualitative approach by completing a self-study over a four-year time period to investigate the roles of relationships in the workplace. The study population included 15 teachers, 30 student teachers, and 5-academic professionals. Margolin found 3-phases relating to relationships and leadership: (1) resistances to the unfamiliar, (2) interdependence, and (3) connectivity. The researcher found in phase-1 employees' behaviors and actions were based on their level of comfort, but without gaining the trust of employees and making employees feel secure organizational leaders cannot influence change. Margolin found in phase-2 working collaboratively with employees' enriched individual knowledge and generated synergies and collegial relationship; also that

autonomy must be an important part of the organizational culture. Finally, Margolin found in phase-3 leaders must openly discuss ethical issues and other employee concerns; all levels of leadership must act in the same manner; and actions must be mutually beneficial for employees and leaders alike being flexible, rather than hierarchical and predictive. Based on the findings Margolin concluded leaders must collaboratively share, even the emergent and difficult experiences with employees as this may increase employee knowledge (Margolin, 2008). Leaders must empower others as it has been shown to generate supportive relationships and trust. The main limitations of Margolin's research are it did not focus on the CLS dimension facilitative leadership; and the study population was restricted to academia.

As part of distributed power, collegial leaders are authoritative figures that collaborate and consider the thoughts and perspectives of employees before executing changes, or the implementing of regulations (Singh, 2013). In many cases when changes or regulations are required, employees generate ideas; employees seek the opportunity, and expend resources to bring ideas to reality (Carr, 1997). However, in complex organizational structures, distributed power requires the clear delineation of roles and responsibilities (Adhikari, 2010; Jarvis, 2012). Distributed power is found within the complexity of many university situations; it requires input from a wide range of skilled employees, which may be obtained through the CLS characteristics of distributed power and facilitative leadership of collaborations (Hatfield, 2006). However, research is required to examine collegiality, distributed power, and facilitative leadership and its effect in nonacademic organizations.

Collegial leadership style dimension facilitative leadership. While much of the emphasis of the CLS is related to distributed power, collegiality and decision-making, it is also about facilitative leadership. Facilitative leadership consists of leaders facilitating the collaborative, cooperative, and interactive behaviors among and between leaders and employee (Brundrett, 1998; Freedman, 2012; Singh, 2013). Facilitative leadership encompasses leaders' behaviors of facilitating collegial interactions among and between employees and requires leaders to gain support and credibility for the decision-making process of distributed power (Brundrett, 1998). Facilitative leadership supports employee growth and provides employees with a sense of being valued contributors to the organization through the sharing of knowledge and expertise (Hirst et al., 2004; Shrifian, 2011). Facilitative leadership is considered an in-house mentoring and training method that increases employee knowledge, collegiality, determination, and motivation (Howze, 2003; Hoy et al., 2002; Shrifian, 2011). When facilitative leadership is used in conjunction with the development of goals and problem solving, employees are more likely to focus on common goal, overcome challenges and develop skills, and professionalism in the workplace (Freedman, 2012; Hoy et al., 2002; Singh, 2013). Hoy et al. (2002) confirmed leaders' use of facilitative leadership has a positive and significant impact on organizational effectiveness.

Lazega and Wattebled (2011) found that the facilitative leadership methods assist employees in: (a) maintaining professional behaviors, (b) increasing the sharing of different values and ideas, and (c) resolving conflicting opinions. Employees are more likely to maintain cooperative and professional relationships with colleagues, when leaders use facilitative leadership methods (Howze, 2003; Thorpe & Kalischuk, 2003).

Through the implementation of facilitative leadership methods, employees' cooperation, professionalism, and collaborative interaction increases, along with their knowledge, skills, and abilities (Bush & Glover, 2013; Busher & Blease, 2000; Freedman, 2012; Shrifian, 2011). Facilitative leadership methods allow each employee's expertise and leadership skill to be acknowledged regardless of their level within the organization; this thereby allows valuable knowledge sharing with colleagues (Bush & Glover, 2013; Busher & Blease, 2000; Freedman, 2012; Shrifian, 2011).

Ansell and Gash (2012) found facilitative leaders' behaviors are important for the success of an organization. Ansell and Gash employed a qualitative approach to reviewed previous literature and conducted semi-structured interviews with 10 employee organizational leaders. Ansell and Gash found that there were 3-responsibilities involved in facilitative leadership: stewardship, mediator, and catalyst; (1) stewardship was demonstrated when leaders guarded, established, and maintained the collaboration process; (2) the mediator role was established as a necessity with distributed power to ensure positive interactions and the settling of conflicts; and (3) the catalyst identifies and capitalizes on opportunities for collective activities. Based on the findings, Ansell and Gash concluded that facilitative leaders must develop, promote, and ensure the organizational processes are collaborative, by forging a usable framework for employees. Leaders should also ensure transparent communication and distribute power, to avoid ambiguity and to maintain trust. Facilitative leadership is not a directive style of leadership, but means leaders facilitating employees' activities. Furthermore, leaders are responsible for all 3-roles, to ensure timeliness, generate consensus, and influence

innovative solutions. The main limitations of Ansell and Gash's study were that the study population was small; and that it did not focus on the CLS dimension of collegiality.

As part of the facilitative leadership process, when decisions are envisioned organizational leaders collaborate with employees, prior to formally reaching an obligatory decision (Jarvis, 2012; Singh, 2013). Leaders who display facilitative leadership tend to have employees who engage in open collaboration, avoid conflict, and interact collegially (Adhikari, 2010; Freedman, 2012; O'Connor & White, 2011). The impacts of facilitative leadership include an increase in employee skill levels, professional conduct, and employee satisfaction along with increased organizational effectiveness (Shrifian, 2011; Singh, 2013).

Some researchers have found support for Shrifian's and Singh's finding for the implantation of facilitative leadership. Hirst et al. (2004) examined facilitative leadership, team development and learning in research and development organizations in Australia. A 1-year mixed method study was conducted with approximately 375 participants (Hirst et al., 2004). Hirst et al. (2004) found that facilitative leadership significantly impacted learning and group performance. Facilitative leadership was positively correlated with customers' assessments of group performance, with socialization, and the learning of new skills and acquiring of knowledge (Hirst et al., 2004). Hirst et al. (2004) concluded that the use of facilitative leadership increases the skills and knowledge of both employees and new leaders. Further the implementation of facilitative leadership increases collegiality within an organization and assists employees in the development of social and professional networks (Hirst et al., 2004). Some limitations of this study were that the study population consisted of project managers instead of leaders and the small

sample sized. An additional limitation is the study was conducted outside of the US; therefore, the results may not be generalized to the US federal government employee population. In addition, the study only examined the facilitative leadership aspect of the CLS and did not consider employee satisfaction or organizational commitment.

Conducting additional research with organizational leaders and a larger more diverse sample may duplicate Hirst et al.'s research findings, and providing further support for the use of facilitative leadership of the CLS.

Leaders recognize the CLS as the preferred style for academic management (Brundrett, 1998). In summary the CLS dimensions of collegiality, distributed power, and facilitative leadership have been found to be key components of successful leader-follower relationships, effective organizations, employee satisfaction, and organizational commitment (Adhikari, 2010; Busher & Blease, 2000; Cipriano & Buller, 2012; Freedman, 2012; Howze, 2003; Naidoo et al., 2012; Padgett, 2013; Shrifian, 2011; Singh, 2013; Yokoyama, 2006). The three dimensions of the CLS have been determined appropriate to use in academic organizations as a method to transform traditional corporate bureaucratic systems into effective and efficient operations (Adhikari, 2010; Jarvis, 2012; Shrifian, 2011; Singh, 2013).

Corporate governance and collegial leadership style. Researchers have studied collegial leaders versus corporate leaders in university cultures (Christopher, 2012; Meyer, 2007; O'Connor & White, 2011; Weinberg & Graham-Smith, 2012; White et al., 2011; Yokoyama, 2006). Weinberg and Graham-Smith (2012) claimed corporate cultures, goals, and stakeholders were incompatible with the CLS fundamentals. Christopher (2012) focused on the autonomous aspect of the CLS within corporate,

academic cultures and determined the CLS adversely affected the corporate organizational governance methodology. Characteristics of the CLS conflict with the corporate leadership approaches (Christopher, 2012; Yokoyama, 2006). When leaders within universities change leadership styles from collegial to managerial it created conflicts related to teachers and staff interactions and instructions (Yokoyama, 2006). White et al. (2011) found increased friction and power struggles existed, which reduced employee collegiality within universities with corporate cultures. In contrast, Kok et al. (2009) explained that mixed collegial and corporate cultures can still maintain some aspects of employee' collegiality.

Some recent researchers corroborated Kok et al.'s (2009) findings. Christopher (2012) studied mixed organizational cultures of collegial and corporate organizational cultures, investigating CLS behaviors within corporate governance structures aimed at maximizing shareholders' wealth. Using a qualitative approach, Christopher conducted semi-structured interviews with employees from 37 Australian public universities. Christopher found collegiality and autonomy are critical factors that impact organizational policies; conflict between collegiality and corporate cultures, existed; and that variations between collegial and corporate practices within each of the universities were present. Leaders worked to maintain a steady and consistent culture with both collegial and corporate influences. Christopher concluded a quasi-corporate and collegial leadership approach can be a model for a successful leadership approach. The mixed leadership governance corporate and collegial model can provide leadership transparency and increased ethical accountability. The main limitations of Christopher's (2012) research are that it did not focus on collegiality or facilitative leadership of the CLS and

the study population was restricted to academia. Conducting additional research with a nonacademic population may replicate Christopher's (2012) findings, and provide nonacademic individuals with a voice on the effectiveness of the CLS. Christopher's (2012) study was conducted within academia outside the US and did not examine the constructs of employee satisfaction and organizational commitment.

Some researchers would not support Christopher's finding that the CLS within quasi-collegial/corporate organizations increase ethical accountability. O'Connor and White (2011) investigated the CLS within Irish and Australian universities as it related to gender and appointments of senior management at the universities. Australian and Irish universities with mixed collegial-managerial leadership models were examined (O'Connor & White, 2011). Using a qualitative approach, researchers interviewed 34 individuals in Irish universities and 21 individuals in Australian universities (O'Connor & White, 2011). A wide formation of hybrid leadership styles was determined to exist within various universities, making it difficult to conclude relevance of collegiality, as it related to gender (O'Connor & White, 2011). O'Connor and White discovered that within universities that exhibited a larger corporate structure, the cultural mix consisted of more like individuals, greater gender inequality among leaders, and employees perceived leaders possessed unrestrained power. O'Connor and White also found some gender imbalance within universities that maintained more of the CLS model. However, leaders operating within more CLS models were less likely to take action to correct perceived gender imbalances (O'Connor & White, 2011). Some limitations of O'Connor and White's research included a small purposive selected sample of senior leaders within universities, and that the questions did not appear to focus on leaders-employees

collegiality or distributed power. Additional research with a larger more diverse population may be able to duplicate O'Connor and White's research findings. Furthermore, research including the CLS dimensions of collegiality and distributed power would provide an enhanced understanding of the CLS within quasi-collegial/corporate organizations. O'Connor and White conducted their study within universities outside the US and did not examine the constructs of employee satisfaction and organizational commitment. Information about the relationship between CLS and employee satisfaction and organizational commitment is needed as federal employee satisfaction ratings of their leadership and workplace have decreased to their lowest levels government-wide, since 2003 (PPC, 2012); and information is needed to ensure strategies to augment effective leadership are complete (PPC, 2013).

Other researchers have also investigated managerial and CLS characteristics as it relate to gender. White et al. (2011) examined leaders' roles and employee perceptions in combining managerial and collegial characteristics in academic cultures and its effect on women leaders in South Africa, Australia, and Portugal. A qualitative approach with semi-structured interviews was utilized (White et al., 2011). White et al. interviewed 61 managers, both males and females across the three countries. White et al. found that in Australia, managerial style prevailed and leaders' decision-making power became centralized, which allowed for greater gender equality. The quasi-corporate environment centralized decision-making activities to a single entity, which provide a larger corporate approach to decision making (White et al., 2011). In South Africa dual collegial and managerial structures manifested power struggles between leadership and employees, with detectable gender equality (White et al., 2011). In Portugal academic institutes'

maintained collegial power and decision making authority, with greater gender imbalance (White et al., 2011). The findings indicated that the corporate management structure had a greater positive impact on the perception of women and their ability to impact decisions. White et al. concluded that women have a greater ability to impact decision making in corporate universities only related to soft leadership, which has little importance in dominate corporate structures. Some limitations of White's et al. research were the small population interviewed, the study's population was limited to senior leaders, and multiple researchers conducted the interviews. The use of multiple researchers and multiple researcher methods increases avoidable threats to reliability. Further research conducted by a single researcher may duplicate White's et al. findings and address any possible reliability concerns. White et al. conducted their study outside the US; therefore, the results may not be generalized to the US federal government employee population.

In summary, the CLS can coexist with corporate governance models within academic cultures (Christopher, 2012; Meyer, 2007). Kok et al. (2009) found the corporate and collegial dual organizational cultures did not mean the CLS was not applicable in academic settings. Researchers determined the CLS should remain within academic cultures even when a corporate governance model exist (Kok et al., 2009). However, extending the CLS within academic corporate governance structures have created perceived gender and power imbalances (O'Connor & White, 2011; White et al., 2011); and tension in employee collegiality, participation, employee effectiveness, and employee accountability (Meyer, 2007). When leaders within corporate structures implement artificial CLS governance structures with the creation of policies and

procedures, employee collegiality is diminished (Brundrett, 1998). While researchers found the CLS embraces what academic leaders perceive as the perfect management style for universities, its feasibility within corporate, academic cultures is unknown (Kok et al., 2009).

Weinberg and Graham-Smith (2012) concurred with Kok's et al. findings.

Weinberg and Graham-Smith used a qualitative approach to review previous literature and to investigate collegiality in corporate universities. Weinberg and Graham-Smith found the integrity of universities, as well as the academics themselves, were undermined as many academics succumbed to the pressure to ensure the university is financially profitable. A fundamental shift in roles has occurred, in which the leaders expect the staff to perform in a service capacity; educators appear to have abandoned collegiality, work ethics, and creativity and are only concerned with promotions and salary increases. Based on the results, Weinberg and Graham-Smith concluded corporate cultures, goals, and stakeholders were incompatible with CLS fundamentals, equating the introduction of corporate governance within academic institutes as the elimination of the CLS aspect of employee autonomy. A crass utilitarianism, it was found appropriates and 'brands' academic values to retain pseudo-prestige, while impoverishing the sense of vocation without which collegiality is rendered an anachronism. The authors proposed a way forward, indicating that a revival of collegial governance is both possible and imperative. The main limitations of Weinberg and Graham-Smith's study were that the study population was restricted to previously published articles; and that it did not focus on the CLS dimensions facilitative leadership and distributed power.

Controversy related to collegial leadership style. Researchers do not agree on a single definition or description of the CLS, CLS behaviors, or CLS governance model (Hatfield, 2006; Lazega & Wattebled, 2011; Singh, 2013); and there have been mixed and somewhat conflicting outcomes relating to the utilization of the CLS in a corporate environment (Bergman et al., 2012; Christopher, 2012; O'Connor & White, 2011).

Although researchers examined mixed organizational governance structure, the studies participants, cultures, and variables researchers examined were dissimilar, which could be the reason for the differing results (Adhikari, 2010; Balsmeyer et al., 1996; Brundrett, 1998; Meyer, 2007; Shrifian, 2011; Singh, 2013). Bolin (2000) reported that the CLS is better suited for academic institutions; while Adhikari (2010) and Singh (2013) claimed collegial leaders positively impact corporations. Mixed university cultures demonstrate a need for a revised definition of the CLS, which recognizes shared leadership with leadership responsibility for oversight and organizational effectiveness (O'Connor & White, 2011). The CLS model emphasizes leaders as persons who interact, collaborate, and orchestrate all activities and tasks (Hatfield, 2006); something, which has attracted limited research outside of academic cultures. Additionally, women senior leaders soft leadership skills are more valued in CLS models than in competitive management cultures (White et al., 2011). Conversely, Brundrett (1998) found no indication that collaboration between employee increases employee collegiality. Based on these inconsistencies additional research is needed with federal employees to extend the CLM in order to gain an enhanced understanding of the CLS applicability in nonacademic organizations and extend the model to new populations (Singh, 2013).

Federal Government Employees and Leadership

The organizational culture of the federal government includes over 2.1 million employees across all fifty states; and is regarded as the largest employer in the US (DOL, 2012). Each of the over 200 plus federal agencies has a unique mission, goals (Whitehouse.com: Our Government: Federal Agencies & Commissions [Whitehouse], n.d.), and organizational culture (PPC, 2013), which the federal employees service. Federal employees are responsible for the various missions of each of the independent agencies. In the accomplishment of each of the agencies' missions federal employees provides critical services and functions for the American people through the management of taxpayers' dollars, to accomplish missions such as care for veterans, America's space program, securing the nation's defense, protecting the US forests, ensuring food safety, and the gathering of intelligence (PPC, 2013). The demographic makeup within the federal agencies is every bit as diverse as that found within the US, as a whole.

Federal employees' satisfaction and commitment. Within most federal agencies, employee satisfaction and commitment have deteriorated over the last three consecutive years with a rating of just 57.8% (PPC, 2013). In 2012, federal employees rated leadership effectiveness at the bottom of 10 work-related categories (PPC, 2012). Survey results indicated federal employee overall satisfaction is in a continuous decline with a minimum 3% drop since 2012 (Office of Personnel Management [OPM], 2013). According to a government-wide management report, the federal employees' satisfaction levels have significantly declined continuous with the previous year's decline (OPM, 2013). Employees who indicated they were leaving their agency within the next 12 months rated leadership effectiveness 35 points lower than employees who were planning

to stay (PPC 2013). Leadership effectiveness has been the critical element driving the decline in employee satisfaction and commitment, as it has been the lowest scoring constituent with an average rating of 51.8% (PPC, 2013). Specifically, senior leaders' ratings decreased, by 2.6-points from 2012, giving an average score of 46.7% (PPC, 2013). The perspectives of senior leaders regarding job satisfaction and commitment was 18.6 points different from employees in 2012 with scores of 82.6% and 64%, respectively (PPC, 2013). When comparing the scores for senior leaders and employees by question, senior leaders rated some questions 28.5 points higher than employees (PPC, 2013).

The primary reason federal government employees left their jobs were due to ineffective leadership (GAO, 2012). Only 42.6% of the federal employees considered their senior leaders provided motivation or generated a level of commitment. Many agencies scored well below the federal government in employee satisfaction and organizational commitment (PPC, 2012).

Employee satisfaction may be a government systemic problem as the GAO (2014) reported specific areas of growing concern with employee satisfaction with their leaders competencies level, communications, and facilitation of collaboration and cooperation, as far back as 2009. The gap between the federal employee and the private sector employee's satisfaction continues to increase (PPC, 2012). In fact, since 2011, the federal employee's perception of their leadership and employee satisfaction was significantly lower by 8-points and 17 points respectively, when compared to private sector employees (PPC 2013). Many federal government agency leaders have reported challenges in: filling vacancies, employee retention, increasing employee satisfaction; meeting mission requirements, and deteriorating services (GAO, 2013). According to a GAO (2014)

report, employee morale has decreased making it an ongoing concern, as employees leave for jobs in the private sector.

The lack of effective leadership has created challenges as it has negatively impacted agencies' productivity and their ability to meet mission goals (GAO, 2013). Some agencies have reported challenges in maintaining skilled employees, providing training and professional development opportunities, and effectively increasing employee morale (GAO, 2014). Federal employees have expressed many reasons for their dissatisfaction with their place of work in terms of issues over, which the organizational leaders have control (GAO, 2013). In addition, federal leaders are challenged with the continuous decline in leadership effectiveness, and federal employees express overall dissatisfaction, lack of commitment with sufficiency of resources, lack of empowerment, and concern over issues of fairness (GAO, 2013).

Some researchers have found that federal employees value collaborative teaming relationship with colleagues and leaders. Joaquín and Park (2013) examined the US federal agencies effectiveness and employee performance. Joaquín and Park assessed data of 3-surveys previously administered in 2007 distributed throughout federal agencies: the management scorecard, the performance assessment rating tool; and the best places to work surveys. Joaquín and Park found human capital management and teamwork scores were high, while program effectiveness was low. Based on the results, Joaquín and Park concluded most agencies successfully manage human capital; most programs implemented by federal agencies are not considered effective; and federal employees' perception of teaming relations with colleagues and leaders was good. Joaquín and Park also concluded federal agencies cultures that were collegial with

decentralized organizational structures of specializations tend to have employee, who have greater commitment and employee have greater interpersonal relationships with colleagues. Finally, Joaquín and Park concluded organizational leaders who implement and actively communicate performance regulations are perceived by employee as effective. The main limitations of Joaquín and Park's research are that it did not focus on the CLS; the lack of individual identifiers; and its use of secondary data.

The impact of leaders on organizational commitment and the motivation of employees in federal government has been an important topic in the literature. Park and Rainey (2008) investigated multiple variables that may affect employee motivation of US federal government employees. Park and Rainey utilized a qualitative method to analyze the responses from the previously conducted 2000 Merit Principles Survey from employees within 22 agencies (Park & Rainey, 2008). Park and Rainey found a positive and significant relationship between employees' perception of their leaders as demonstrating leadership skills and possessing attributes related to the transformational leadership style such as supportiveness, effective communication, genuine concern, and ethical standards and employee satisfaction, motivation, and productivity. The findings also indicated increased autonomy, empowerment, fairness, and good communication can increase employee satisfaction. Park and Rainey concluded additional researcher is required to determine how federal government employees as a public service provider, "relates to leadership behaviors, autonomy, and empowerment" (p. 132). The main limitations of Park and Rainey's research are that it did not focus on any of the three CLS dimensions: collegiality, distributed power, and facilitative leadership and that the study was restricted to analyzing previously obtained survey.

In summary, federal employee ratings of leadership effectiveness, job satisfaction, and organizational commitment indicate changes in strategies to facilitate effective leadership are required to ensure federal agencies are able to provide the critical mission services due to the American people (PPC, 2013). According to the GAO (2014) former as well as current federal government employees reported, dissatisfaction, distrust of leaders, low morale, and lack of commitment to their respective organization. Research indicates leaders' ineffective behaviors are the key factor in employees' negative perception and lack of commitment (PPC, 2013). Researchers have found employees value aspects the dimensions collegiality, distributed power of the CLS (Joaquín & Park, 2013); and the three dimensions of the CLS can positively impact employee motivate (Park & Rainey, 2008). Without an effective implementation strategy to improve employee satisfaction and organizational commitment the American taxpayers' quality of service will continue to be negatively impacted and continue to deteriorate (PPC, 2013).

Summary

The most critical resource at the disposal of organizational leadership is the employee (Ciulla, 2006). Organizational leaders have the responsibility to ensure the organizational mission is successfully accomplished (Basford et al., 2012; Caldwell et al., 2010); and they are a critical element in organizational performance and effectiveness, as well as employee attitudes (Sumner-Armstrong et al., 2008). However, recent research indicated within federal agencies, employee satisfaction and commitment have deteriorated over the last three consecutive years and leadership effectiveness has been the critical element driving the decline in employee satisfaction and commitment (PPC, 2013).

Many researchers examining effective leadership behavior or effective organizational cultures have determined that the attributes of the CLS within academia can positively affect employee satisfaction, employee collegiality, and organizational commitment. The literature also indicated leaders who use the CLS understand they need employees to be successful and that power and knowledge sharing will assist everyone in growing (Shrifian, 2011). The utilization and implementation of the CLS or aspects thereof within organizations can stimulate employee innovation and promote Herculean efforts from otherwise average employees (Bolin, 2000). Specifically, the CLS dimensions of collegiality (Freedman, 2012; Douglas, & McClelland, 2009; Loeffler et al., 2010); facilitative leadership (Jarvis, 2012; Mukhtar, 2011); and distributed power (Bush & Glover, 2012; Busher & Blease, 2000; Howze, 2003; Jarvis, 2012); have been found to improve leader-follower relationships and communications, fosters mutual respect, and enhances trust. However, not all researchers agree (Bolin, 2000; Fischer, 2009; Haag, 2005; Thorpe & Kalischuk, 2003). Thus, a better understanding of the impacts of the three CLS dimensions collegiality, distributed power, and facilitative leadership, was needed.

Many predictive correlational studies have been conducted within academia to explore how CLS behaviors predict employees' satisfaction and organizational commitment, using several predictor variables. However, the impact of the CLS in nonacademic organizations is a fairly new phenomenon. Studies of the CLS outside of academic institutes is relatively limited to hotels and restaurants (Adhikari, 2010); Roman Catholic dioceses (Lazega & Wattedled, 2011); and hospital (Padgett, 2013; Thorpe & Kalischuk, 2003). The studies under review have not clearly demonstrated that leadership

strategies, which utilize the CLS dimensions collegiality, distributed power, and facilitative leadership can confidently be considered as a method to improve employee satisfaction and organizational commitment, in nonacademic organizations (Akert & Martin, 2012; Busher & Blease, 2000). Based on the status of the equivocal nature of the findings about CLS and the lack of ability to generalize the existing research findings to federal agencies, because of differences in organizational structure, taxpayers as stakeholders, public service oriented missions, and funding methodology of federal agencies more research was needed (Shah, 2011). Such information may be used to enhance the understanding of the relationship between the CLS dimensions of collegiality, facilitative leadership, and distributed power, employee satisfaction, and organizational commitment within federal agencies.

Chapter 3: Research Method

The general problem was that federal employee satisfaction ratings of their leadership and workplace had decreased to its lowest levels government-wide, since 2003 (PPC, 2012). For three consecutive years, federal employees' satisfaction and commitment had declined to 57.8% (PPC, 2013). Researchers had shown that employees of ineffective leaders are unsatisfied and lack commitment (Brollier, 1985; Dobbins & Russell, 1986; Lakshman, 2008; Yukl, 2012). The federal government's ineffective leadership equated to billions of avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012).

Researchers studying strategies to promote effective leadership behaviors had found a relationship between the dimensions collegiality, facilitative leadership, and distributed power of the CLS, employee satisfaction, and organizational commitment in some organizational cultures (Adhikari, 2010; Howze, 2003). Researchers found the CLS is essential for positively fostering academic cultures and influencing academic employees (Christopher, 2012; Shrifian, 2011); and Adhikari (2010) found the CLS increases organizational effectiveness in hotels and restaurants. However, generalization of previous research findings to federal agencies was prohibited because of differences in organizational structures, taxpayers as stakeholders, public service oriented missions, and funding methodology of federal agencies (Shah, 2011). The specific problem that prompted this research was that before suggestions to promote collegiate leadership to foster employee satisfaction in federal agencies can be promulgated, an understanding of the relationship between collegiality, facilitative leadership, and distributed power of the

CLS employee satisfaction, and organizational commitment within federal agencies was required.

Research was needed to extend the CLM in order to gain an enhanced understanding of the CLS applicability in nonacademic organizations and extend the model to new populations (Singh, 2013). A study focusing on the CLS in a federal culture could lead to strategies to augment effective leadership, which may increase federal employee satisfaction ratings (PPC, 2013).

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS to predict employee satisfaction and organizational commitment within federal agencies. The population of the study was approximately 316,700 federal government employees throughout the US. The sample of the study was 122 participants, which exceeded the minimum of 107 as deemed necessary by a priori G*Power analysis to achieve statistical power of .05. The study participants included full-time federal government employees between the ages of 18 and 65 throughout the US. The predictor variables of collegiality, facilitative leadership, and distributed power of the CLS were measured with already existing instruments. Collegiality was measured with the Collegiality Scale (CS) developed by Hoy et al.'s (2003), which provides statistical data about employees' perception of leaders' portrayal of collegiality; as well as employees' perceptions of colleagues' collegiality. Facilitative leadership was measured with the Facilitative Leadership Scale (FLS) developed by Hirst et al. (2004), which yields statistical data about leaders' behaviors in facilitating and promoting collegiality within the workplace. Distributed power was measured with the Distributed Power Scale (DPS)

developed by Slattery and Goodman (2009), and represents employees' perception of distributed power within federal agencies. To gather statistical data about employee satisfaction, participants completed the employee satisfaction scale (ESS) developed by Andrews and Withey (1976). Participants also completed the organizational commitment scale (OCS) developed by Marsden et al. (1993) to gather and examine information regarding the degree of employees' commitment to their organization. Descriptive analyses included calculation of variable means, standard deviations, and graphs for each of the study variables. Inferential analyses included multiple regression analysis to determine the predictive relationship of the CLS dimensions of collegiality, facilitative leadership, and distributed power (predictor variable) on employee satisfaction and organizational commitment (criterion variables). The following research questions and hypotheses were utilized.

Q1. To what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government?

Q2. To what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government?

H₁₀: Collegiality, facilitative leadership, and distributed power of the CLS do not predict employee satisfaction in employees of the federal government.

H_{1a}: Collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government.

H2₀: Collegiality, facilitative leadership, and distributed power of the CLS do not predict organizational commitment in employees of the federal government.

H2_a: Collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government.

Research Methods and Design

A quantitative research approach was utilized for the current study. The results of a quantitative study allow researchers to clarify relationships among specified variables (Castellan, 2010; Trochim & Donnelly, 2008). Quantitative research approaches are considered a “formal, objective, deductive approach to problem solving” (Mahoney & Goertz, 2006, p. 235). In addition, Lee (1992) stated that quantitative research approaches greatly depend on statistical data and records.

The quantitative method was appropriate for the current study because the relationship of the CLS dimensions collegiality, facilitative leadership, and distributed power (predictor variable) on employee satisfaction and organizational commitment (criterion variables) was examined among federal employees, verifying the stated hypotheses (Castellan, 2010). As suggested by Castellan (2010), the utilization of a quantitative research approach is appropriate when there are specific questions that will be investigated. The quantitative research approach was applicable for the current study as it concentrates on precise constructs that can be simply quantified numerically (Castellan, 2010; Cozby & Bates, 2011). The quantitative research approach was also appropriate as it could produce measurable data that can be statistical analyzed then generalized to some larger population, such as the federal government (Vaitkevicius & Kazokiene, 2013). Unlike qualitative research designs, quantitative methods allow

researchers to study phenomena in the pragmatic world by examining variable that are not manipulated (Castellan, 2010). The qualitative approach was not appropriate as it best suited for research, which objectives are to investigate problems, provide voices to the participants outline the complexity the phenomenon and expresses multiple perspectives (Jackson, 2012; Szyjka, 2012; Trochim & Donnelly, 2008). Because the current study examined a specific timeframe, the qualitative research approach was inappropriate, as flexibility to react to emerging situations is not required (Cozby & Bates, 2011).

A correlational research design was utilized for the current study. The correlational design was appropriate for the current study because the research includes the exploration of the relationship between variables. Not only does correlational research include the direction of the relationships but also an evaluation of the type and strength of the relation of the variables, which can contribute to an enhanced understanding of phenomena in the pragmatic world (Castellan, 2010; Jackson, 2012). Finally, the results of this quantitative correlational research can become the foundation for future experimental research studies (Ellis & Levy, 2008; Sinuff et al., 2007). The correlational design was appropriate because the predictor variables would not be manipulated and could be obtained from a single point in time (Szyjka, 2012). The correlational research method was appropriate for conducting the current study because the variables to be investigated are defined allowing for the determination of variables synchronize functionality, rather than comparison of one naturally-occurring group with another (Szyjka, 2012; Trochim & Donnelly, 2008). The correlational design was also considered superior as the nature of participants' response inferred organismic predictor variables make it impossible for a true experiment (Szyjka, 2012; Trochim & Donnelly, 2008). The

correlational method was appropriate as the objective of the research was to determine the relationship between variables, as opposed to a determination of causality (Castellan, 2010; Jackson, 2012; Szyjka, 2012; Trochim & Donnelly, 2008).

Population

The population of the study was approximately 316,700 full-time federal government employees between the ages of 18 and 65 located throughout the US derived from the researcher's contact list, LinkedIn groups and LinkedIn discussion boards. The researcher's contact list was comprised of current and past federal employee colleagues, students, and friends. The researcher is also a member of LinkedIn that has several industry specific groups and message boards. Individuals on the researcher's contact list and members from specific LinkedIn groups were sent an email invitation and an invitation was also posted on the LinkedIn discussion boards requesting federal employee participation. The US federal government connections, procurement professional business network, and employees of the federal government groups within LinkedIn.com have over 316,700 individual members, which included federal government employees throughout the US (see Table 1). All participants were confirmed as federal government employees with self-certification, as part of the survey.

Table 1

Study Population

| Population Descriptions | Total Membership |
|--|------------------|
| Federal employee contact list | 400 |
| LinkedIn US federal government connections group | 282,270 |

(continued)

| Population Descriptions | Total Membership |
|--|------------------|
| LinkedIn procurement professional business network group | 25,089 |
| LinkedIn employees of the federal government group | 7,292 |
| LinkedIn Status Update (Researchers Individual Page) | 1,713 |
| Approximate total study population | 316,700 |

Sample

The sample of the study was 122 federal government employee participants, which exceeded the minimum of 107 as deemed necessary by a priori G*Power analysis to achieve statistical power of .05. Possible participants were identified through a convenience sampling approach in the form of nonprobability sampling in which individuals identified within a convenient population were selected as participants in the study. This nonprobability convenience sampling was considered feasible and appropriate for this study (Trochim & Donnelly, 2008). Also, the study sample included diversity with various participant demographic factors such as gender, age, race, length of service, supervisory status, education levels, and federal agencies throughout the US. All of the individuals from the various lists and groups were invited to participate in the study and self-certify as federal government employee.

Materials/Instruments

The materials for this study consisted of five already published and validated assessment tools combined into one study questionnaire that was administered via the Internet-hosting site, Survey Monkey. There are several advantages of utilizing an internet-based questionnaire for data collection. Because the quantitative approach

requires a large amount of participants, the questionnaire survey data collection technique assisted in the reduction of costs and interview hours required (Cozby & Bates, 2011). The survey technique along with the use of the internet simplified (Castellan, 2010); and quantified participants' perspective (Vaitkevicius & Kazokiene, 2013); related to CLS. Another advantage of utilizing an internet-based questionnaire for data collection included participant anonymity allowed for an increase in truthfulness in the responses for the participants (Leedy & Ormrod, 2010). Disadvantages of collecting data utilizing an internet-based survey included the potential for lower response rate and lack of opportunities to address specific individual participants' concerns in a timely manner (Trochim & Donnelly, 2008). Additionally, individuals that receive questionnaires typically discard online surveys resulting in low participation (Leedy & Ormrod, 2010). To ensure that an adequate sample was obtained, invitations were sent to every known or self-identified federal government employee from the approximate 316,700 population, with multiple reminder notifications that was sent to participants to achieve the 107 participant minimum required.

Organizational climate index (OCI) scale. The organizational climate index (OCI) developed by Hoy et al. (2003) was used to measure collegiality. The OCI is a 30 question instrument, with a 4-point Likert-style response format that measures four dimensions of organizational climate to include the leaderships' influence and colleagues' professionalism. The OCI is a short-form, which is a combination of the Hoy and Tarter (1997) developed Organizational Health Inventory (OHI) and Organizational Climate Description Questionnaire (OCDQ) developed by Hoy et al. (2003). Although the OCI contains 4-subscales, only the CLS and Professional Teacher Behavior subscales

were utilized. The CLS subscale measures leaders' primary behaviors of supportiveness, friendliness, openness, and equality (Hoy et al., 2003; Hoy et al., 1996; Hoy & Tarter, 1997). The Professional Teacher Behavior subscale measures employees' behaviors of supportiveness, professional interactions with colleagues, commitment to customers, autonomous decision making, and willingness to assist colleagues in a professional manner (Hoy et al., 1996; Hoy et al., 2003; Hoy & Tarter, 1997). A factor assessment of multiple samples of the instrument confirmed the construct validity of the instrument (Hoy et al., 2003). According to Hoy et al. (2003), the reliability scores for the collegiality subtest were: (1) leadership behavior (.94), and (2) employee behavior (.88).

Shared power scale. The shared power instrument developed by Shrivastava and Nachman (1989) was used to measure distributed power. The 15 question instrument with a Likert-type response format was developed evaluate participants' opinions of distributed power within their respective organization (Shrivastava & Nachman, 1989). Shrivastava and Nachman utilized three sources for creating the instrument: literature review; discussions with a diverse group of professionals; and personal experiences. According to Shrivastava and Nachman (1989) the reliability score for shared leadership was strong at (Cronbach's alpha coefficient = .93). Construct validity was verified by correlating scores from the shared power instrument with the scores from two other key instruments (the autonomy subscale of the work environment scale developed by Moos in 1994 and conditions for work effectiveness scale developed by Chandler in 1986, and the shared power instrument exhibited good reliability (Shrivastava & Nachman, 1989).

Job satisfaction scale. The 5-question satisfaction with work scale developed by Andrews and Withey (1976) was used to measure employee satisfaction. The scale is a

realistic short questionnaire that can be used to measure overall job satisfaction (Rentsch & Steel, 1992). The instrument has been shown to have good validity and reliability. Cronbach's alpha for the job satisfaction scale was $\alpha = .81$ (Rentsch & Steel, 1992). Rentsch and Steel (1992) also established convergent validity for the scale by comparing scores of the instrument to both the Job Descriptive Index (JDI) by Smith, Kendall, and Hulin (1969) and the Minnesota Satisfaction Questionnaire (MSQ) by Weiss, Davis, England, and Lofquist (1967). The job satisfaction scale also correlated well with the constructs "organizational commitment, turnover intentions, and job performance" (Rentsch & Steel, 1992, p. 362).

Facilitative leadership instrument. The facilitative leadership instrument developed by Hirst et al. (2004) was used to measure facilitative leadership. The instrument consists of a 3-questions about facilitative leadership and a 7-point Likert-style response format, which measures whether or not leaders': (1) provide all employees the opportunity to share their ideas; (2) ensures conflicts do not negatively impact employees; and (3) participate in activities to foster relationships amongst colleagues (Hirst et al., 2004).

To determine if the facilitative leadership and team reflexivity questions measured separate constructs, a confirmatory factor analysis was conducted (Hirst et al., 2004). Two models were analyzed: (1) a one-factor model with both facilitative leadership and team reflexivity questions; and (2) a two-factor model with facilitative leadership and task reflexivity items separated (Hirst et al., 2004). When compared, the two factor model had superior fit. Additionally, Hirst et al. (2004) stated discrimination validity was established on the two-factor model using Fornell and Larcker's (1981) discrimination

validity test. Hirst et al. (2004) utilized a repeat measure research method and administered a total of four questionnaires; however, due to the low response rate, analysis of the last two questionnaires could not be conducted. The reliability scores for facilitative leadership for the four administered questions were: (1) .73, (2) .79, (3) .77, and (4) .76, in respective order. In addition, the content validity of the facilitative leadership researcher instrument was established by a team of leaders, who assessed each question within the instrument.

Organizational commitment instrument. The organizational commitment instrument developed by Marsden et al. (1993) was used to measure overall organizational commitment. Marsden et al. concluded, based on a word analysis, the questionnaire items closely resembled the work commitment instrument of (Lincoln & Kalleberg, 1990) and encapsulated the main features of (Mowday et al., 1979) commitment scale. Of the 6-questions, one question measures employees' willingness to put forth effort for their respective organization; three questions measure employees' confidence and agreement with the stated organizational standards and goals; and two questions measure employees' desire to remain employed with the organization. The coefficient alpha value for organizational commitment was .78 (Marsden et al., 1993). According to Marsden et al. (1993), construct validity was verified by correlating organizational commitment with job related variables items with related measures.

Demographic questionnaire. Participants was asked to respond to eight demographic questions about federal government status, federal government agency, length of service, supervisory status, gender, age, race, and education level (see Appendix F). This information was used to describe the study sample.

Operational Definition of Variables

In this study, the CLS dimensions collegiality, distributed power, and facilitative leadership are considered the predictor variables, and employee satisfaction and organizational commitment are considered the criterion variables.

Collegiality. Turner and Willis (1981) defined collegiality as employee involvement in managing their respective department and organization. Collegiality a CLS dimension (Howze, 2003; Shrifian, 2011), also includes the social behaviors amongst and between leaders and employees, which positively influences cooperation and culture within the organizational (ten Brummelhuis et al., 2010). Collegiality is genuine and open employee-to-employee or supervisor-to-employee interactions (Hoy et al., 1996; Hoy & Tarter, 1997). According to Hoy et al. (1996), collegiality is displayed when leaders and employee are able to speak freely, but remain supportive, and receptive to others thoughts. In the current study, collegiality was operationally defined using the organizational climate index (OCI) developed by Hoy et al. in 2003 (see Appendix A). Collegiality was assessed by participants' responses to 14 questions about employee collegiality, and a 4-point Likert-type response format scale (rarely occur = 1, to very frequently occur = 4). Based on the instrument scoring information, a total score was calculated for each participant to describe their level of collegiality. The range of the scale is 14-56, and the instrument yields interval data.

Distributed power. One of the CLS dimensions is distributed power (Howze, 2003). Distributed power involves leaders sharing decision-making authority with employees (Bergman et al., 2012; Kok et al., 2009; Shrifian, 2011). Bush (2000) noted that when leader distribute power instead of providing instruction and direction, they

support and guide employees in the decision making process. In the current study, distributed power was operationally defined using the shared power scale instrument developed by Shrivastava and Nachman in 1989 (see Appendix B). Distributed power was assessed by participants' responses to 15 questions about distributed power, and a 5-point Likert-type response format scale (rarely = 1, to often =5). Based on the instrument scoring information a total score was calculated for each participant to describe the perceive level of distributed power. The range of the scale is 15-75, and the instrument yields interval data.

Employee satisfaction. Locke (1976) defined employee satisfaction as a positive, agreeable, and enjoyable feeling regarding the assessment of one's work or experiences within the workplace. In the current study, employee satisfaction was operationally defined using the Andrews and Withey (1976) satisfaction with work research instrument (see Appendix C). Employee satisfaction was assessed by participants' responses to 5-questions about employee satisfaction, and a 7-point Likert-type response format scale (terrible = 1, to delighted =7). Based on the instrument scoring information, a total score was calculated for each participant to describe their level of satisfaction. The range of the scale is 5-35, and the instrument yields interval data.

Facilitative leadership. Another CLS dimension facilitative leadership is defined as leaders' behaviors that assist and support employees' functions, communications, and receipt of resources (O'Connor & White, 2011). Facilitative leadership also includes leaders ensuring the appropriate platforms, experts, and employees' professional autonomy are established to permit employees to operate collaboratively with colleagues and other leaders within organizations (O'Connor & White, 2011). Hirst et al. (2004)

found facilitative leadership encouraged employees to seek and share ideas. In the current study, facilitative leadership was operationally defined using the Hirst et al. (2004), facilitative leadership research instrument (see Appendix D). Facilitative leadership was assessed by participants' responses to 3-questions about facilitative leadership, and a 7-point Likert-type response format scale (not at all well = 1, to extremely well = 7). Based on the instrument scoring information, a total score was calculated for each participant to describe their perception of facilitative leadership. The range of the scale is 3-21, and the instrument yields interval data.

Organizational commitment. Mowday et al. (1979) characterized organizational commitment as a force that connects a person to remain loyal to and with an organization. Organizational commitment is demonstrated when employees choose to stay and forego leaving the organization as well as choosing to association themselves with the organization (Mowday et al., 1979). In the current study, organizational commitment was operationally defined using the Marsden et al. (1993), organizational commitment research instrument (see Appendix E). Organizational commitment was assessed by participants' responses to 6-questions about organizational commitment, and a 4-point Likert-type response format scale (strongly disagree = 1, to strongly agree = 4). Based on the instrument scoring information, a total score was calculated for each participant to describe their level of organizational commitment. The range of the scale is 6-24, and the instrument yields interval data.

Table 2
Sources for Measurement and Permissions

| Variable | Questions | References | Permission |
|---------------------------|-----------|--------------------------------|------------|
| Collegiality | 9-22 | Hoy et al. (2003) | Appendix G |
| Distributed Power | 23-36 | Shrivastava and Nachman (1989) | Appendix H |
| Facilitative Leadership | 37-41 | Hirst et al. (2004) | Appendix I |
| Employee Satisfaction | 42-44 | Rentsch and Steel (1992) | Appendix J |
| Organizational Commitment | 45-50 | Marsden et al. (1993) | Appendix K |

Data Collection, Processing, and Analysis

After approval by the Northcentral University Institutional Review Board, participant recruitment began with an invitation email (see Appendix L) sent to approximately half of the individuals on the researcher's contact list of federal government employees, an invitation posted on the LinkedIn groups message boards (see Appendix M). Four days later the other half of individuals on the researchers contact list of federal government employees were emailed. The e-mail outlined the purpose of the study, explained voluntary nature of the study and provided the web link to the informed consent agreement (see Appendix N) and survey. The informed consent document advises participants of: (1) the purpose of the study, (2) all known potential risks and benefits for participants, and (3) the voluntary and anonymous nature of the questionnaire. Participants were required to check radio boxes "I do agree," which acknowledge they have read and understood the information, before the questionnaire was opened. Following participants' agreement to take part in the study, they were sent to the study link that contains the survey webpage to complete the study at their

convenience. The survey webpage consisted of a closed ended questionnaire, as radio buttons for participants to answer questions related to the study constructs. To increase response rate, approximately a week later of each of the original e-mail a subsequent email (see Appendix O) was sent urging those participants that did not complete the survey to follow the link and complete the survey.

Data analysis. Upon completion of the data collection process, the data were exported to a Microsoft Excel format where questionnaire responses was examined for outliers and missing entries. All incomplete questionnaires were removed from further analyses. The resulting data, after the removal of the incomplete and discarded questionnaires, was imported into IBM SPSS statistical software version 22 for additional analysis.

Descriptive statistics and inferential statistics were calculated using the IBM SPSS statistical software application. Descriptive statistics were calculated with a two-tailed bivariate Pearson correlation coefficient test. The Pearson test was performed to determine if the variables are correlated. Descriptive statistics included the study variables means, standard deviations, and graphs for all study variables. Inferential analyses included multiple regression analysis (and their assumption tests) to assess the effects of the CLS dimensions collegiality, distributed power, and facilitative leadership (predictor variables) on employee satisfaction and organizational commitment (criterion variables).

Assumptions

Several assumptions are made about this research. First, it was assumed that participants would answer the survey questions honestly and that sufficient data would be

collected to compare the parameters to be estimated. Another assumption was the study would be limited to federal government employees. It was also assumed the study would be limited by the unique interpretations of participants (federal government employees) from various geographic locations. Accordingly, it was assumed participants may experience diverse work environments and the various cultural differences may affect participants' interpretation of the study questionnaire. The data collected from participants was assumed reliable and measurable, and the appropriate assumption test would be carried out prior to data analysis. The final assumption was that the nonprobability convenience sampling and the sample size would be adequate to achieve statistical power of .05.

Limitations

Potential limitations to this study included the possibility that only utilizing the quantitative approach may obscure other employee satisfaction and organizational commitment issues, which could result in incomplete solutions (Atieno, 2009; Thamhain, 2014). The selected variables represented the important and salient components; however, limiting the study to the selected variables means not encapsulating the full range of variables, which could be related to employee satisfaction and organizational commitment (Thamhain, 2014; Trochim & Donnelly, 2008).

Another possible limitation was the honesty of participants' responses, which may include bias and assumption. Response bias occurs when participants respond to questions based on their idiosyncrasies and personal experiences, consciously or unconsciously distorting the truth (Spector, 2004; Villar, 2008). Participants' subjective

perceptions cannot be eliminated; therefore, it was accepted as a potential limitation of the study.

Delimitations

The study population was delimited to full time US federal employees. The objective of this delimitation was to enable the results of this study to be generalizable to federal government in terms of employee satisfaction and organizational commitment. Restricting participation to federal employees ensured the participants have the requisite experience and knowledge to respond fully to the study questions.

Ethical Assurances

When researching organizational leadership, one of the many ethical concerns was the magnification or exasperation of any issue, which may already exist within the organization (American Psychological Association [APA], 2003). Participants were assured their responses were anonymous, confidential, and would not be shared with anyone within the federal government. The anonymous nature of the questionnaire (data collection method) allowed for an increase in participants' candid, open and honest responses (Cozby & Bates, 2011; Leedy & Ormrod, 2010). All participants were also required to acknowledge reading and understanding the information within the informed consent document. The content within the informed consent document consisted of information of the envisioned research methods and potential risks (US Department of Health and Human [DHHS], 1997). Participants' acknowledgement served as their agreement to take part in the study and accept the risks as noted in the informed consent (DHHS, 1997; Trochim & Donnelly, 2008). In essence, all participants were afforded the chance to determine if they were willing to take part in the study (DHHS, 1997). All data

collected from participants were stored in a password protected computer or locked drawer to ensure the data were protected throughout the research project.

Respect for individuals, beneficence and justice, are the principles that served as the general code of conduct for conducting this study, as suggested by (DHHS, 1979). A few actions were taken to avoid ethical dilemmas. First, participants were provided several chances to ask questions for all aspects of the anticipated study (APA, 2003). Second, to ensure participants remain anonymous throughout the study, only participants' basic demographic information was collected.

Summary

Research was needed to extend the CLM and provide an enhanced understanding of the CLS's influences on employee satisfaction and organizational commitment in populations outside of education (Giffords, 2009; Singh, 2013). The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies.

A nonprobability convenience sampling of federal government employees was invited to participate in the study in order to achieve a sample size of at least 107 as indicated by a priori power analysis. The participants completed the study questionnaire, via the Internet. The study questionnaire consisted of previously published and validated instruments to ascertain information about the CLS dimensions collegiality, facilitative leadership, distributed power and employee satisfaction, and organizational commitment. IBM SPSS statistical software version 22 was used to conduct data analysis. A multiple regression analysis was conducted to examine the study hypotheses.

Chapter 4: Findings

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies. The study participants included full-time federal government employees between the ages of 18 and 65 throughout the US. The predictor variables of collegiality, facilitative leadership, and distributed power of the CLS were measured with already existing instruments. Collegiality was measured with the Collegiality Scale (CS) developed by Hoy et al. (2003), which provided statistical data about employees' perception of leaders' portrayal of collegiality; as well as employees' perceptions of colleagues' collegiality. Facilitative leadership was measured with the Facilitative Leadership Scale (FLS) developed by Hirst et al. (2004), which yielded statistical data about leaders' behaviors in facilitating and promoting collegiality within the workplace. Distributed power was measured with the Distributed Power Scale (DPS) developed by Slattery and Goodman (2009), and represented employees' perception of distributed power within federal agencies. To gather statistical data about employee satisfaction, participants completed the employee satisfaction scale (ESS) developed by Andrews and Withey (1976). Participants also completed the organizational commitment scale (OCS) developed by Marsden et al. (1993) that gathered and examined information regarding the degree of employees' commitment to their organization.

Descriptive analyses included calculation of variable means, standard deviations, correlational relationships between the variables, and graphs for each of the study variables. Inferential analyses included multiple regression analysis to determine the

predictive relationship of the CLS dimensions of collegiality, facilitative leadership, and distributed power (predictor variable) on employee satisfaction and organizational commitment (criterion variables). This chapter presents information about data collection and preparation, descriptive analysis including calculation of variable means, standard deviations, and graphs for each of the study variables and inferential analyses correlation analysis, regression analysis, hypotheses testing, results, and an evaluation of the findings.

Results

The population of this study was approximately 316,700 federal government employees (civilians) employed throughout the US. The sample of the study was 122 participants, which exceeded the minimum of 107 as deemed necessary by a priori G*Power analysis to achieve statistical power of .05. The study participants were all full-time federal government employees between the ages of 18 and 65. The survey site was available for participants at the internet-hosting site, <http://surveymonkey.com/s/collegial> where they could both access and complete at their convenience. The survey collection period was January 8, 2015 through January 22, 2015. All potential participants accepted the disclosure statement before initiating the questionnaire and voluntarily completed the survey. A total of 188 potential participants accessed the survey with 4 (2%) individuals dropping out after starting, creating an incomplete response; 37 (20%) of the individuals certified they were other than federal employees; and 25 (13%) of the individuals skipped at least one question creating missing data fields (see Table 3). Therefore, the percentages of usable validate responses calculated; as 122/188 was 65% (see Table 3). All 122 validate participants self-certified that they were federal employees.

Table 3

Total Number and Percentage of Usable Surveys

| Survey Description | Number | Percentage |
|--|--------|------------|
| Total number of incomplete surveys (participants that dropped out) | 4 | 2% |
| Number of “other than civilian” employee designation status | 37 | 20% |
| On-Site Contractors | 29 | 15% |
| Military | 8 | 4% |
| Total number of surveys with missing data | 25 | 13% |
| Total/Percentage of usable surveys | 122 | 65% |
| Total number of surveys initiated | 188 | 100% |

Data preparation. All data were exported from the internet-host site as an excel raw data form and imported into SPSS. Each response was assigned a numerical code and all responses, which were incomplete or missing data were removed before importing into SPSS. A total of 122 complete response sets were imported into SPSS. Next, the researcher used SPSS to check for errors, and to check for values that fell outside the range of possible values for each variable. There were no errors found in the error check. In the scale the wording of the facilitative leadership and employee satisfaction questions were reversed to assist in preventing response bias. Before a total score for the variables was calculated, the two scales were reviewed to ensure all items were scored with the high scores indicating high levels of facilitative leadership and employee satisfaction. Next, total scores for each of the subscales were calculated in SPSS.

Reliability analysis of utilized scales. According to Hoy et al. (2003), the Organizational Climate Index Scale has good internal consistency, with Cronbach alpha

coefficient scores reported for the collegiality subtest, of: (1) leadership behavior (.94), and (2) employee behavior (.88). In the current study, the Cronbach alpha coefficient was (.90) for leadership behavior and (.91) for employee behavior (see Table 4). According to Shrivastava and Nachman (1989) the reliability score for Shared Leadership Scale was strong at $\alpha = .93$. In the current study, the Cronbach alpha coefficient for the Distributed Power Scale was lower at (.67). Rentsch and Steel (1992) indicated the Job Satisfaction Scale had good reliability with a Cronbach's alpha at $\alpha = .81$. In the current study, the Cronbach alpha coefficient for the Employee Satisfaction Scale was strong at (.90). The reliability scores for the Facilitative Leadership Scale for the four administered questions were: (1) .73, (2) .79, (3) .77, and (4) .76, in respective order (Hirst et al., 2004). In the current study, the Facilitative Leadership Scale was consistent at $\alpha = .85$ (see Table 4). According to Marsden et al. (1993), the Cronbach alpha coefficient value for the Organizational Commitment Scale was $\alpha = .78$ (see Table 4). In the current study, the Cronbach alpha coefficient value for the Organizational Commitment Scale was $\alpha = .48$.

Table 4

Cronbach Alpha Coefficient (Reliability Values)

| Scale | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items |
|-------------------------|------------------|--|
| Supervisor Collegiality | .904 | .904 |
| Employee Collegiality | .907 | .907 |
| Distributed Power | .673 | .692 |
| Facilitative Leadership | .851 | .852 |

(continued)

| Scale | Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items |
|---------------------------|------------------|--|
| Employee Satisfaction | .890 | .894 |
| Organizational Commitment | .475 | .513 |

Participant demographics and descriptive analysis. Participant demographic characteristics were evaluated (see Table 5). Of the 122 study participants, 100% self-certified as US federal government employees (Civilian). The findings indicated that slightly more female participants 68 (56%) than male participants 54 (44%) completed the survey.

Table 5

Participants Federal Status and Gender

| Description of Demographics | #Participants | Percentage |
|-----------------------------|---------------|------------|
| Federal government status | | |
| Federal Employee Civilian | 122 | 100% |
| Gender | | |
| Female | 68 | 56% |
| Male | 54 | 44% |

Of the participants, 6 (5%) reported having 1 - 3 years of experience working as a federal government employee, 3 (2%) reported having 4 - 5 years, 19 (16%) reported having 6 - 10 years; 26 (21%) reported having 11 - 20 years, 26 (21%) reported 20 - 25 years, and 36 (30%) reported having 26 or more years of experience (see Table 6). A total of 5 (4%) of the study participants had a Doctoral degree, 71 (58%) had a Master's degree, 38 (31%) had a Bachelor's degree; while, 8 (7%) had a High School degree. A

majority 64 (52%) of the participants reported being non-supervisory, 26 (21%) reported being team leads, 12 (10%) reported being first-line supervisors, 13 (11%) reported being mid-level supervisors, and 7 (6%) reported being Senior Executives (see Table 6). The majority of participants, 51 (42%) were between the age 50 - 59, none reported being between 18 – 25, or 26 - 29, 15 (12.0%) were between the age 30 - 39, 47 (39%) were between the age 40 – 49, and 9 (7%) reported being 60 years and older (see Table 6). Almost half of the participants 60 (49%) self-identified their race as Black/African American., while 1 (1%) identified themselves as American Indian/Alaskan Native, 4 (3%) identified themselves as Asian/Pacific Islander, 50 (41%) identified themselves as white/Caucasians, and 7 (6%) preferred not to identify themselves (see Table 6). Finally, of the 122 study participants, 30 (25%) self-certified as Department of Homeland Security (DHS) employees, 64 (52%) self-certified as National Aeronautics and Space Administration (NASA) employees, and 28 (23%) reported being employed by other US federal government agencies (see Table 6).

Table 6

Participant Demographic Information

| Demographics Description | #Participants | Percentage |
|--------------------------|---------------|------------|
| Length of service | | |
| 1 – 3 years | 6 | 5% |
| 4 – 5 years | 3 | 2% |
| 6 – 10 years | 19 | 16% |
| 11 – 20 years | 26 | 21% |
| 20 – 25 years | 32 | 26% |
| 26 – Over years | 36 | 30% |

(continued)

| Demographics Description | #Participants | Percentage |
|--|---------------|------------|
| Supervisory Status | | |
| Non-Supervisory | 64 | 52% |
| Team Lead | 26 | 21% |
| First-line Supervisor | 12 | 10% |
| Mid-Level Supervisor | 13 | 11% |
| Senior Executive Service (SES) | 7 | 6% |
| Education level | | |
| High School | 8 | 7% |
| College Graduate | 38 | 31% |
| Post Graduate Degree | 71 | 58% |
| Doctoral Graduate | 5 | 4% |
| Age | | |
| 18 to 25 | 0 | 0 |
| 26 to 29 | 0 | 0 |
| 30 to 39 | 15 | 12% |
| 40 to 49 | 47 | 39% |
| 50 to 59 | 51 | 42% |
| 60 or older | 9 | 7% |
| Race | | |
| American Indian/Alaskan Native | 0 | 0 |
| Asian/Pacific Islander | 1 | 1% |
| Black/African American | 60 | 49% |
| Hispanic/Latino | 4 | 3% |
| White/Caucasian | 50 | 41% |
| Prefer Not to Answer | 7 | 6% |
| Federal government agency | | |
| Department of Homeland Security (DHS) | 30 | 25% |
| National Aeronautics and Space Administration (NASA) | 64 | 52% |
| Other Federal Agency | 28 | 23% |

Descriptive statistics for study variables. Prior to hypothesis testing, descriptive analyses, including measures of central tendency were investigated to ascertain the study variables (see Table 7). For each of the variables total scores were calculated. Scores for each participant consisted of the addition of scores on each of the questionnaire items for the individual variables. The variable score range for the predictor variables was a minimum of 7.00 and a maximum of 28.00 for employee collegiality (M=19.54; SD=4.51); a minimum of 7.00 and maximum of 28.00 for supervisor collegiality (M=20.25; SD=5.12); a minimum of 14.00 and maximum of 56.00 for distributed power (M=32.88; SD=5.60); a minimum of 4.00 and maximum of 21.00 for facilitative leadership (M=14.47; SD=3.60); a minimum of 6.00 and maximum of 48.00 for organizational commitment (M=6.00; SD=2.80); and a minimum of 5.00 and maximum of 35.00 for employee satisfaction (M=27.15; SD=5.44).

Table 7

Descriptive Analysis of Study Variables

| | Minimum | Maximum | Mean | Std. Deviation |
|---------------------------|---------|---------|---------|----------------|
| Employee Collegiality | 7.00 | 28.00 | 19.5410 | 4.51471 |
| Distributed Power | 14.00 | 56.00 | 32.8770 | 5.60192 |
| Supervisor Collegiality | 7.00 | 28.00 | 20.2541 | 5.11934 |
| Organizational Commitment | 6.00 | 24.00 | 15.1967 | 2.79799 |
| Facilitative Leadership | 4.00 | 21.00 | 14.4672 | 3.59794 |
| Employee Satisfaction | 5.00 | 35.00 | 27.1557 | 5.44851 |
| CLS | 35.00 | 133.00 | 87.1393 | 15.62172 |

Note: $\eta = 122$

Correlational relationships among study variables. A Pearson product moment correlation analysis was conducted to determine whether or not there were significant relationships among the study variables. The Pearson correlation coefficient for the CLS dimensions of collegiality, facilitative leadership, and distributed power were tested both as separate variables, and as a single variable (CLS).

The relationship amongst and between perceived supervisor and employee collegiality and employee and employee collegiality (as measured by the CS developed by Hoy et al.) within federal agencies along with perceived organizational commitment (as measured by the OCS developed Marsden et al.) were investigated (see Table 8). A significant positive relationship was found for both supervisor and employee collegiality with a Pearson correlation coefficient of $r = .389$ and $r = .468$ respectively, and ($p < .01$; $\eta = 122$) for organizational commitment. The relationship between perceived facilitative leadership (as measured by the FLS developed by Hirst et al.) within federal agencies and perceived employee satisfaction (as measured by the OCS developed by Marsden et al.) was investigated using the Pearson correlation coefficient (see Table 8). There was also a significant positive relationship found between the variables with ($r = .322$; $\eta = 122$; $p < .01$). The relationship between perceived distributed power (as measured by the DPS developed by Slattery and Goodman) within federal agencies and perceived employee satisfaction (as measured by the OCS developed by Marsden et al.) was investigated, again using the Pearson correlation coefficient (see Table 8). A significant positive relationship was also found between the variables, ($r = .470$; $\eta = 122$; $p < .01$), with high levels of perceived distributed power associated with high levels of perceived employee satisfaction. To further examine the CLS the relationship between leaders' perceived

utilization of the CLS (as measured by the CS, DPS, and FLS) within federal agencies and perceived employee satisfaction (as measured by the ESS developed by Marsden et al.) was investigated using the Pearson correlation coefficient. Again, a significant positive relationship between the variables of collegiality and employee satisfaction were found ($r = .506$; $\eta = 122$; $\rho < .01$). A high positive relationship indicates that as the use of the CLS increased, employee satisfaction increased.

Table 8

Pearson's Correlation Coefficient of Variables

| | Supervisory Collegiality | Employee Collegiality | Distributed Power | Facilitative Leadership | CLS |
|---------------------------|-----------------------------|--------------------------|----------------------|----------------------------|--------|
| Employee Satisfaction | .620** | .645** | .573** | .710** | .759** |
| Organizational Commitment | .389** | .468** | .470** | .322** | .506** |

Note: $\eta = 122$; ** Correlation is significant at the 0.01 level (2-tailed).

A significant positive relationship was found for employee collegiality and supervisor collegiality, $r(122) = .620$, $\rho < .01$ and a significant positive relationship was obtained between employee collegiality and employee satisfaction, $r(122) = .645$, $\rho < .01$. The relationship between perceived facilitative leadership and perceived employee satisfaction was also positively and significantly correlated, $r(122) = .710$, $\rho < .01$. A significant positive relationship was also found between perceived distributed power and perceived employee satisfaction, $r(122) = .573$, $\rho < .01$. Finally, a significant positive relationship was found between collegiality and employee satisfaction, $r(122) = .710$, $\rho < .01$. This significant positive relationship indicated that as the use of the CLS increased, employee satisfaction increased correspondingly.

Assumption testing for inferential analyses. Preliminary analyses were performed to ensure that the assumptions for multiple regression were not violated. Specifically, tests were conducted to evaluate the assumptions of normality, linearity, and homoscedasticity.

Normality. Normality of distribution was analyzed through the evaluation of skew and kurtosis values, in addition to a visual assessment of histogram graphs, scatterplots, and normal P-P plots. The normality assessment indicated appropriate level of skewness and kurtosis for most of variables. Skewness and kurtosis values between -1 and +1 are considered appropriate (see Table 9). However, three of the variable (distributed power, employee satisfaction, and organizational commitment) kurtosis were larger than +1, however this can result in an underestimate of the variance, and this risk is reduced with a large sample. Therefore, an inspection of distributions was conducted using histogram graphs. Figures 1 to 7 shows the histogram graphs for all of the predictor and criterion variables.

Table 9

Descriptive Analysis Normality of Distribution

| | Skewness | | Kurtosis | |
|-------------------------|-----------|------------|-----------|------------|
| | Statistic | Std. Error | Statistic | Std. Error |
| Employee Collegiality | -.174 | .219 | -.086 | .435 |
| Supervisor Collegiality | -.427 | .219 | -.427 | .219 |

(continued)

| | Skewness | | Kurtosis | |
|----------------------------|-----------|------------|-----------|------------|
| | Statistic | Std. Error | Statistic | Std. Error |
| Distributed power | .338 | .219 | 2.026 | .435 |
| Facilitative leadership | -.739 | .219 | .504 | .435 |
| Collegial Leadership Style | -.308 | .219 | .662 | .435 |
| Employee Satisfaction | -.986 | .219 | 2.029 | .435 |
| Organizational Commitment | -.146 | .219 | 1.199 | .435 |

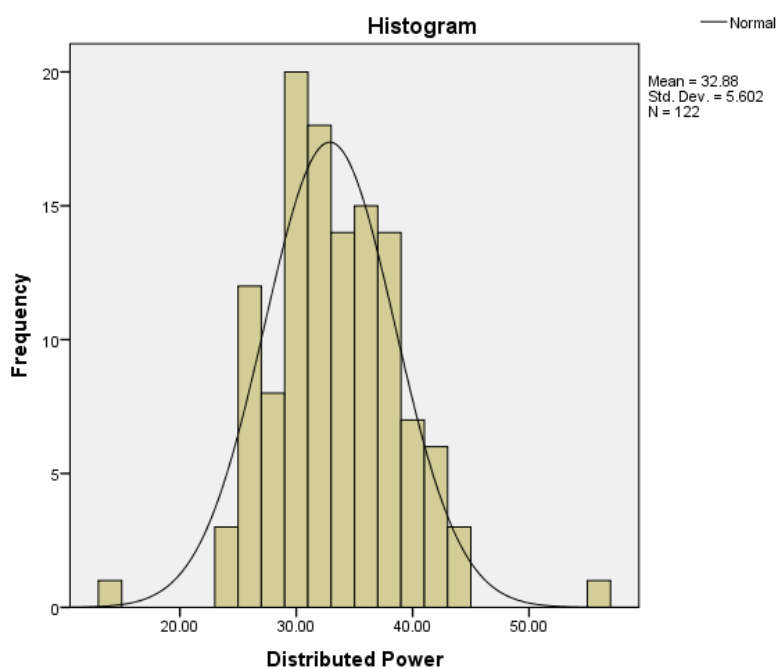


Figure 1. Histogram of distributed power

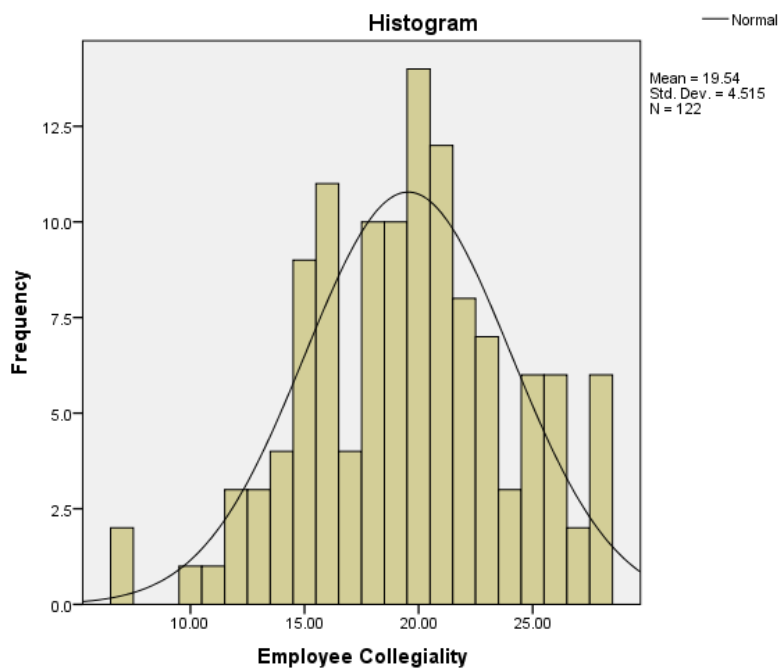


Figure 2. Histogram of Employee Collegiality

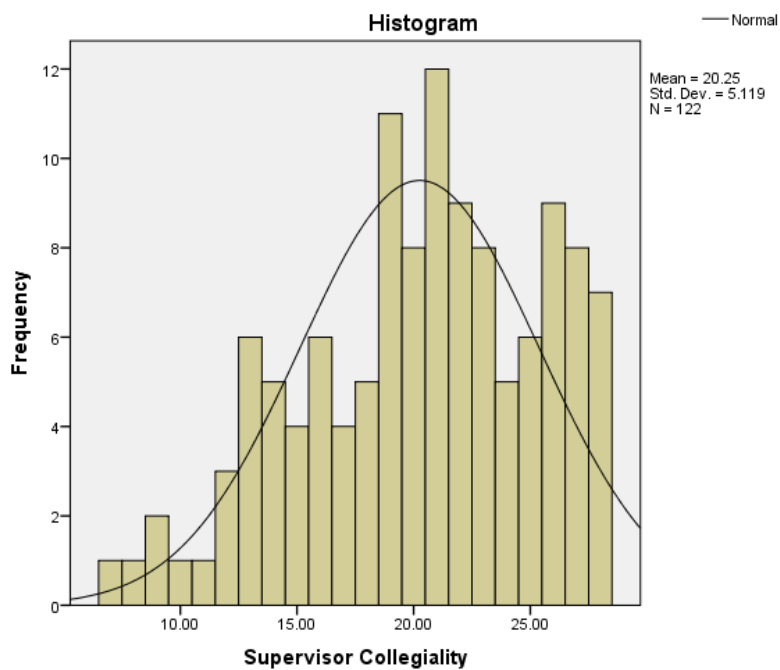


Figure 3. Histogram of Supervisor Collegiality

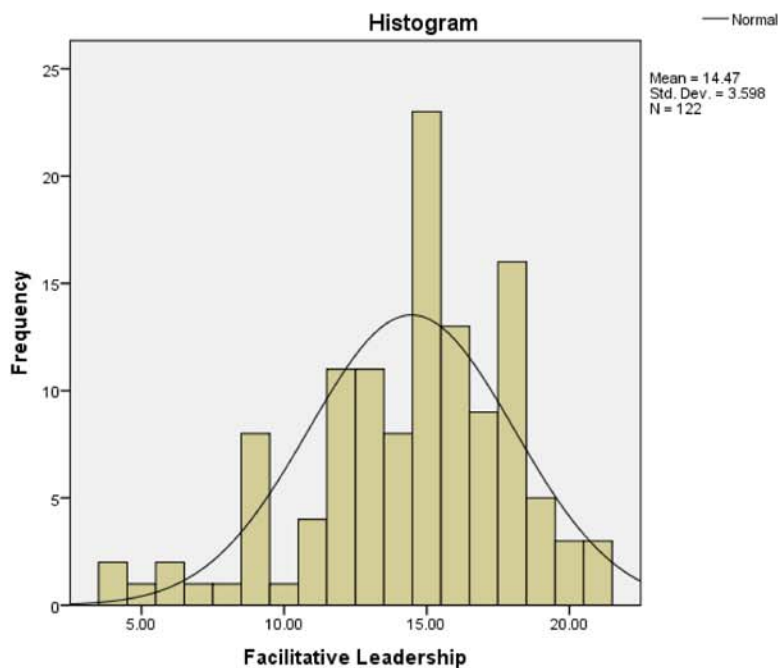


Figure 4. Histogram of Facilitative Leadership

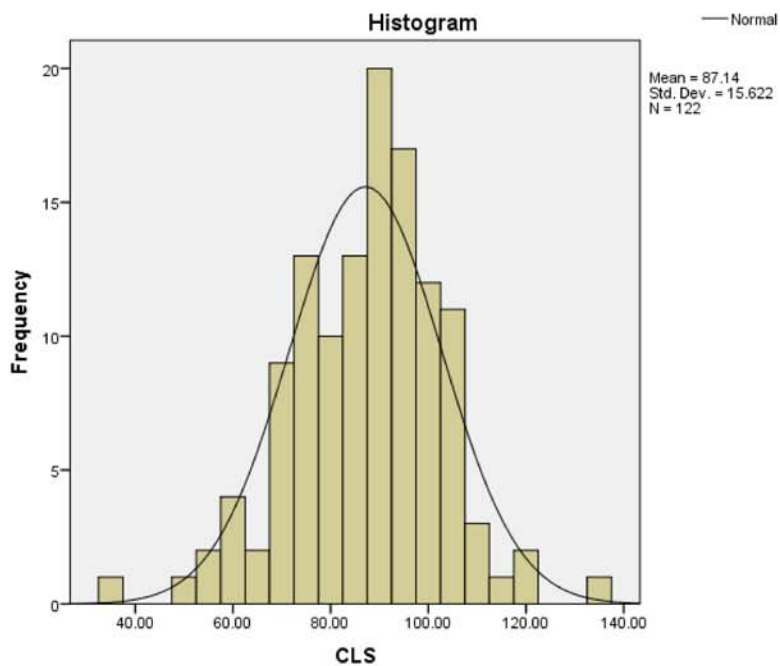


Figure 5. Histogram of Collegial Leadership Style

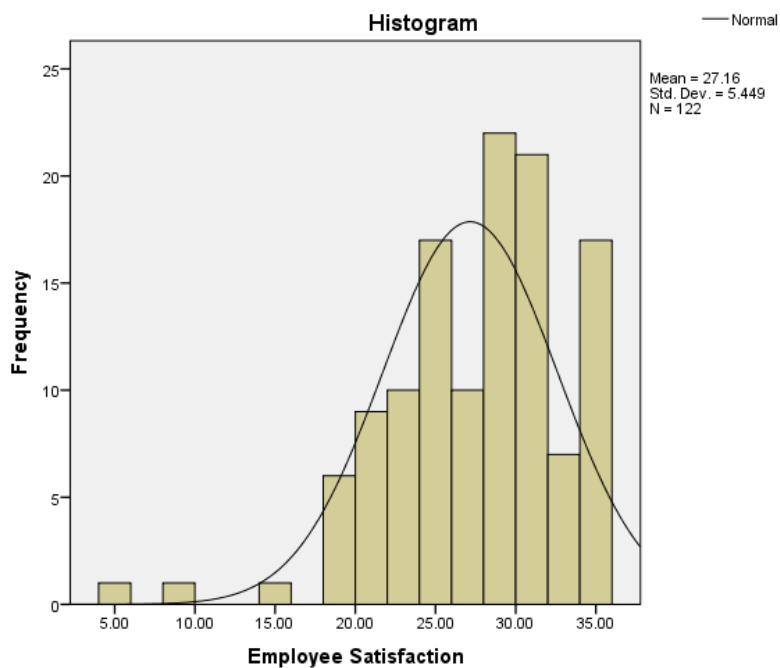


Figure 6. Histogram of Employee Satisfaction

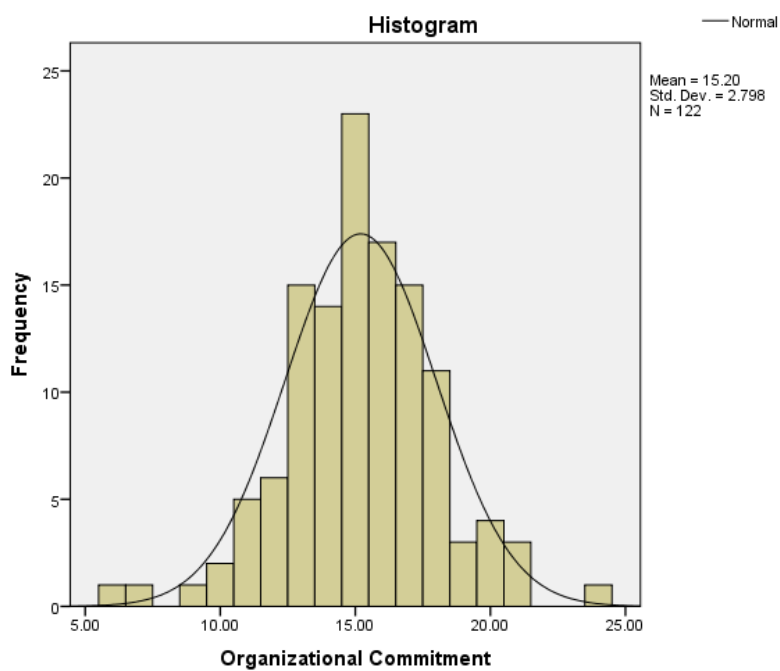


Figure 7. Histogram of Organizational Commitment

The visual inspection of the histogram graphs indicated data were normally distributed, although some of the graphs showed a slight negative skew. Based on these results it was determined that the assumptions of normality were met.

Linearity and homoscedasticity. A residual scatterplot and a normal probability plot (P-P) of the regression model were examined to assess the linear relationships between the predictor and criterion variables. The first set of test included a normal probability P-P plot of the regression model and scatterplot and between the predictor variables (employee collegiality, supervisor collegiality, distributed power, facilitative leadership, and CLS) and criterion variable (employee satisfaction). The results indicated there was no evidence of nonlinear relationships between the variables. Figure 8 shows the normal probability P-P plot forms a straight diagonal line, which indicates there were no major deviations from normality. In the scatterplot of the standardized residuals, (Figure 9) the points were randomly and evenly distributed throughout the plot. Based on these results the assumptions of linearity and homoscedasticity were met.



Figure 8. Normal P-P plot of regression standardized residual - ES

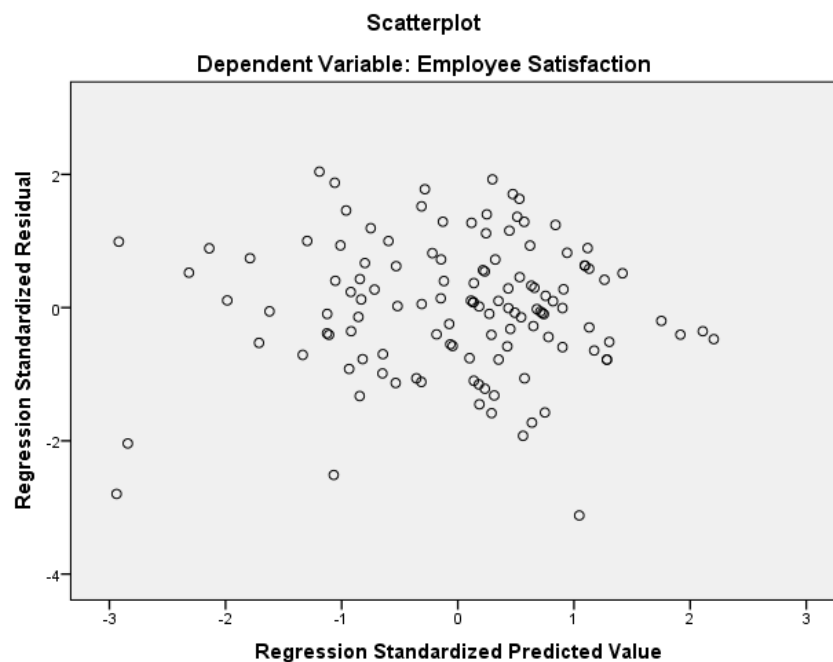


Figure 9. Scatterplot of the standardized residuals - ES

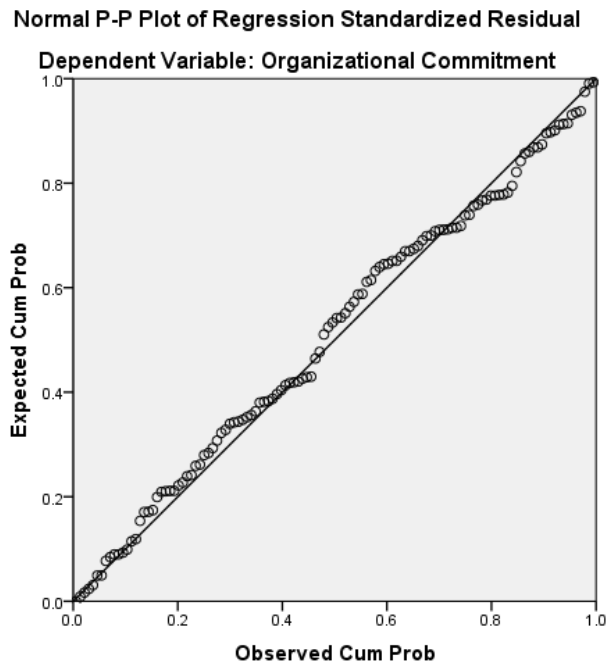


Figure 10. Normal P-P plot of regression standardized residual - OC

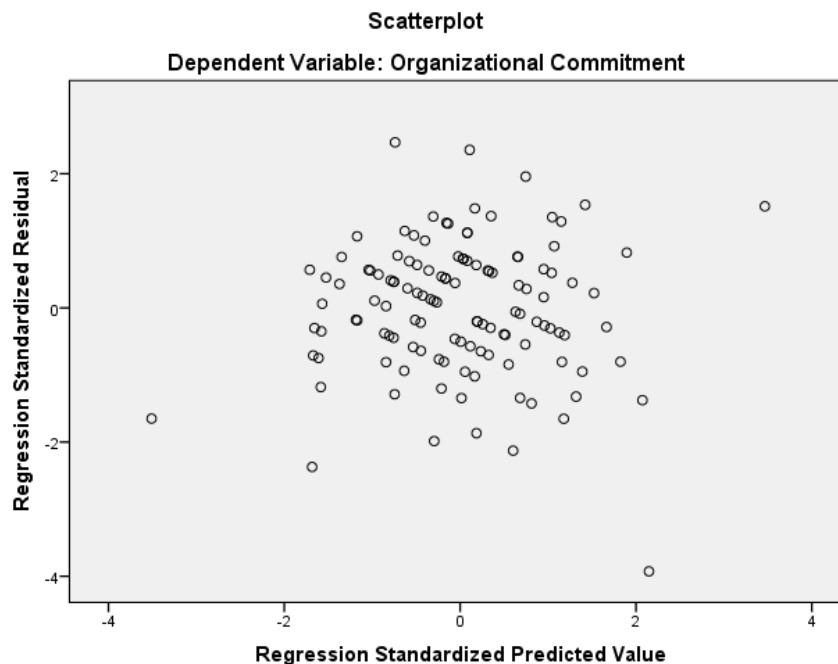


Figure 11. Scatterplot of the standardized residuals - OC

The next test included a normal probability P-P plot of the regression model and scatterplot and between the predictor variables (employee collegiality, supervisor collegiality, distributed power, facilitative leadership, and CLS) and criterion variable (organizational commitment). The results indicated there was no evidence of nonlinear relationships between the variables. Figure 10 shows the normal probability P-P plot forms a straight diagonal line, which indicates there are no major deviations from normality. In the scatterplot of the standardized residuals, (Figure 11) the points were randomly and evenly distributed throughout the plot. Based on these results the assumptions of linearity and homoscedasticity were met. Therefore, based on these satisfactory results it was deemed appropriate to use multiple regression to evaluate the research questions.

Research questions. Multiple regression analyses were performed to evaluate the research questions. In both analyses the dimensions collegiality, distributed power, and facilitative leadership of the CLS were predictor variables, and in one analysis employee satisfaction was the criterion variable and in the other analysis organizational commitment was the criterion variable.

Research question one. Research question one asked, to what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government? The null hypothesis was collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government and the research hypothesis was collegiality, distributed power, and facilitative leadership of the CLS do not predict employee satisfaction in the federal government. Four multiple regression models for the predictive variables were created to examine the three dimensions of the CLS to determine how well the variables are able to predict employee satisfaction. The regression analysis results suggested that for all four-regression models a significant percentage of the variance in employee satisfaction and the CLS was found as a predictor of employee satisfaction (see Table 10). Accordingly, the null hypothesis for research question one was rejected. That is, the current findings suggest that collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government.

Table 10

Results of Multiple Regression Analysis: Employee Satisfaction

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-------------------------|-----------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 11.953 | 1.689 | | 7.078 | .000 |
| | Employee Collegiality | .778 | .084 | .645 | 9.237 | .000 |
| | $R^2 = .416$ | | | | | |
| | $F = 85.326$ | | | | | |
| 2 | (Constant) | 7.545 | 1.543 | | 4.890 | .000 |
| | Employee Collegiality | .434 | .085 | .359 | 5.083 | .000 |
| | Facilitative Leadership | .770 | .107 | .508 | 7.189 | .000 |
| | $R^2 = .593$ | | | | | |
| | $F = 86.529$ | | | | | |
| 3 | (Constant) | 5.747 | 1.933 | | 2.973 | .004 |
| | Employee Collegiality | .390 | .090 | .323 | 4.347 | .000 |
| | Facilitative Leadership | .693 | .118 | .457 | 5.881 | .000 |
| | Distributed Power | .115 | .075 | .118 | 1.530 | .129 |
| | $R^2 = .600$ | | | | | |
| | $F = 59.115$ | | | | | |
| 4 | (Constant) | 5.836 | 1.891 | | 3.086 | .003 |
| | Employee Collegiality | .379 | .088 | .314 | 4.323 | .000 |
| | Facilitative Leadership | .576 | .124 | .381 | 4.644 | .000 |
| | Distributed Power | .034 | .080 | .035 | .423 | .673 |
| | Supervisor Collegiality | .220 | .087 | .207 | 2.520 | .013 |
| | $R^2 = .621$ | | | | | |
| | $F = 47.933$ | | | | | |

Note: $\eta = 122$

In model one, employee collegiality explained a significant percentage of the variance (41.6 %) in employee satisfaction ($R^2 = .416$, $F(1, 120) = 85.326$, $p < .01$); in model two employee collegiality and facilitative leadership explained a significant percentage of the variance (59.3 %) in employee satisfaction ($R^2 = .593$, $F(2, 119) = 86.529$, $p < .01$); in model three, employee collegiality, facilitative leadership, and distributed power explained a significant percentage of the variance (60.0 %) in

employee satisfaction ($R^2 = .600$, $F(3, 118) = 59.115$, $p < .01$); and in model four employee collegiality, facilitative leadership, distributed power, and supervisor collegiality combined explained a significant percentage of the variance (62.1 %) in employee satisfaction ($R^2 = .621$, $F(4, 117) = 47.933$ $p < .01$). In all four models, therefore, the CLS dimensions were found to be a significant predictor of employee satisfaction. Therefore, based on the findings the null hypothesis for research question one was rejected.

Research question two. Research question two asked what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government? The null hypothesis was that collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government and the research hypothesis was that collegiality, facilitative leadership, and distributed power of the CLS do not predict organizational commitment in the federal government. Four multiple regression models for the predictive variables were created to examine the three dimensions of the CLS to determine how well the variables are able to predict employee organizational commitment. The regression analysis results suggested that for all four-regression models the three dimensions of CLS are a significant percentage of the variance in organizational commitment and the CLS dimensions were found to be predictors of organizational commitment (see Table 11). Accordingly, the null hypothesis for research question two was rejected. That is, the current findings suggest that collegiality, facilitative leadership, and distributed power of the CLS predict employee organizational commitment in the federal government.

Table 11

Results of Multiple Regression Analysis: Organizational Commitment

| | Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|-------------------------|-----------------------------|------------|---------------------------|-------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 9.531 | 1.003 | | 9.506 | .000 |
| | Employee Collegiality | .290 | .050 | .468 | 5.798 | .000 |
| | $R^2 = .219$ | | | | | |
| | $F = 33.616$ | | | | | |
| 2 | (Constant) | 6.560 | 1.323 | | 4.958 | .000 |
| | Employee Collegiality | .186 | .058 | .299 | 3.220 | .002 |
| | Distributed Power | .152 | .046 | .305 | 3.280 | .001 |
| | $R^2 = .284$ | | | | | |
| | $F = 23.55$ | | | | | |
| 3 | (Constant) | 6.578 | 1.328 | | 4.955 | .000 |
| | Employee Collegiality | .197 | .062 | .318 | 3.198 | .002 |
| | Distributed Power | .164 | .052 | .329 | 3.183 | .002 |
| | Facilitative Leadership | -.043 | .081 | -.055 | -.532 | .596 |
| | $R^2 = .285$ | | | | | |
| | $F = 15.701$ | | | | | |
| 4 | (Constant) | 6.606 | 1.326 | | 4.981 | .000 |
| | Employee Collegiality | .194 | .062 | .312 | 3.146 | .002 |
| | Distributed Power | .139 | .056 | .277 | 2.465 | .015 |
| | Facilitative Leadership | -.080 | .087 | -.103 | -.917 | .361 |
| | Supervisor Collegiality | .070 | .061 | .127 | 1.136 | .258 |
| | $R^2 = .293$ | | | | | |
| | $F = 12.128$ | | | | | |

Note: $\eta = 122$

In model one, employee collegiality explained a significant percentage of the variance (21.9 %) in organizational commitment ($R^2 = .219$, $F(1, 120) = 33.616$, $p < .01$); model two, employee collegiality and facilitative leadership explained a significant percentage of the variance (28.4 %) in organizational commitment ($R^2 = .284$, $F(1, 119) = 23.552$, $p < .01$); in model three, employee collegiality, facilitative leadership, and distributed power explained a significant percentage of the variance (28.5 %) in

organizational commitment ($R^2 = .285$, $F(1, 118) = 15.701$, $p < .01$); and in model four employee collegiality, facilitative leadership, distributed power, and supervisor collegiality explained a significant percentage of the variance (29.3 %) in the CLS dimensions and were found to be a significant predictor of organizational commitment. Therefore, based on the findings the null hypothesis for research question two was rejected.

Evaluation of Findings

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment within federal agencies. The predictor variables (collegiality, facilitative leadership, and distributed power of the CLS) and the criterion variables (employee satisfaction and organizational commitment) were measured with already existing instruments. The CLM was developed from behavioral science research (Davis, 1968); rooted in educational research (Brundrett, 1998); and is part of the social behavior theory, which is used to explain the CLS social constructs related to organizational culture, friendliness, and social connection (Hatfield, 2006). The concept of the CLS was developed as part of the educational development theory (Bush, 2000); is the leading paradigm relating to the management of academic institutions (Brundrett, 1998); and is a leadership and power relationship model (Davis, 1968; Jarvis, 2012).

Overall, the current findings indicated the dimensions collegiality, distributed power, and facilitative leadership of the CLS or aspects of the CLS can predict employee satisfaction and organizational commitment. The current findings corroborate prior

research demonstrating the three dimensions (both separately and combined) of the CLS positively impact employees. Specifically, the current findings match those of Brundrett (1998), Howze (2003), and Shrifian (2011) who suggested the CLS could improve employee skills, invoke trust, motivate employees, and promote a positive culture with the CLS dimensions collegiality, distributed power, and facilitative leadership. Based on the findings of the current study, those researchers' findings are extended to include the positive impact that leaders who demonstrate the CLS will increase employee satisfaction and organizational commitment.

Research question one evaluation. The findings of the current study showed that separately and combined the CLS dimensions of collegiality, distributed power, and facilitative leadership have a statically significant positive relationship with and can predict employee satisfaction. Moreover, the contribution of each of the three dimensions of the CLS statistically contributed to the prediction of employee satisfaction. The findings suggest that leaders, who use the three CLS dimensions of collegiality, distributed power, and facilitative leadership, tend to have employees who affirm higher employee satisfaction. Also, the results indicated that leaders increased use of the CLS increases employee satisfaction.

The results of this study corroborate and extend several researchers' findings. The current findings that the three dimensions of collegiality, distributed power, and facilitative leadership of the CLS predicted an increase in employee satisfaction corroborated the findings of, Locke (1995), Lorber and Skela (2012), Sakiru et al. (2013) and van den Pol-Grevelink et al. (2012). The current findings corroborated the findings of Locke (1995) and van den Pol-Grevelink et al. (2012) who demonstrated that employee

satisfaction is influenced by employees' experiences and interactions with organizational leaders and colleagues, but extend that research to CLS concepts. The current findings also supported the findings of Lorber and Skela (2012) who assessed employee satisfaction and identified factors, which affected employee satisfaction with nurses at 4-hospitals in Slovenia. As in the current investigation, Lorber and Skela found leaders' behaviors had a large impact on employee satisfaction. The current findings also generally corroborate the findings of Loo (2006), who demonstrated that organizational leaders' behaviors can affect employee satisfaction, and organizational commitment, but extend the research to the CLS as a predictor of employee satisfaction, and organizational commitment. The findings of the current study extend the research of Lorber and Skela (2012) and Loo (2006) to the behaviors in the dimensions collegiality, distributed power, and facilitative leadership of the CLS as predictors of employee satisfaction.

Collegiality and employee satisfaction. The use of the CLS dimension of collegiality involves leaders and employees display of social behaviors, moral values, trustfulness, friendliness, and fairness (Dubrow, 2004; Watt, 2005). The current findings support the findings of Hatfield (2006) who demonstrated when employees display a lack of collegiality it can result in stress, lack of professionalism, dissatisfaction, segregation, and increased conflict (Hatfield, 2006); which may impact employee satisfaction (Hirst et al., 2004). The current findings also support the findings of Singh (2013) who indicated that employee satisfaction and leaders' social behavior were correlated and when organizational leaders demonstrate higher social behaviors, employees are more likely to experience increased job satisfaction and extend Singh's results to outside of academia to US federal agencies.

Distributed power and employee satisfaction. The use of the CLS dimension of distributed power involves leaders providing trusted employees with the autonomy to make decisions and the opinions of employees being considered (Jarvis, 2012; Naidoo et al., 2012). The current findings support the findings of Heponiemi et al. (2014), who found employee satisfaction tended to be higher when organizational leaders distribute power by providing employees with more autonomy and more control; and employee satisfaction decreases when organizational leaders display behaviors, which employees perceive as negative. The current findings corroborated the research of Park and Rainey (2008) who demonstrated leaders who increased the utilization of the aspects of distributed power such as autonomy, empowerment, fairness, and good communication could increase employee satisfaction; however, the current findings extend this notion to all three dimensions of CLS concept. The current findings also support the findings of Singh (2013), who demonstrated the use of the CLS or dimensions of the CLS increased employee satisfaction. As in the current investigation, Singh (2013) found that employee satisfaction was significantly correlated with leaders' power distribution to employees, especially when the leaders were not viewed as authoritative figures who executed regulation without collaborating and considering the ideas and perspectives of employees. In contrast, the current findings do not support the results Jarvis (2010) who demonstrated that an excessive approach to distributed power negatively impacted employees. The present findings also do not corroborate findings of Heponiemi et al. (2014) who reported employee satisfaction would decrease when organizational leaders do not distribute power, which employees perceive as negative.

Facilitative leadership and employee satisfaction. The findings of the current research support the findings of Caldwell et al. (2010), who demonstrated when leaders encourage employees to collaborate and share such as in facilitative leadership, it positively impacts employee satisfaction. The findings of the current research also support the findings of Shrifian, (2011) and Singh (2013), who demonstrated the dimension of facilitative leadership of the CLS increased employee satisfaction, along with increased organizational effectiveness. The findings also generally support the results of Howze (2003), Hoy et al. (2002), and Thorpe and Kalischuk (2003) who found the dimension facilitative leadership of the CLS has a significant positive impact on organizational effectiveness, which has been shown to be related to employee satisfaction (Ciulla, 2006; Freedman, 2012).

Research question two evaluation. The findings of the current research showed that separately and combined; the CLS dimensions of collegiality, distributed power, and facilitative leadership have a statically significant positive relationship with and can predict organizational commitment. Moreover, the contribution of each of the three dimensions of the CLS statistically contributed to the prediction of organizational commitment. The current research findings suggests that leaders, who utilize the three CLS dimensions of collegiality, distributed power, and facilitative leadership, tend to have employees who affirm higher organizational commitment. Also, the results indicated that leaders increased use of the CLS increases organizational commitment.

Collegiality and organizational commitment. The current findings support the findings of Dipaola and Guy (2009) who found that leaders who utilize aspects of collegiality and facilitative leadership generate greater organizational commitment. Also,

similar to the current findings, Secretan (2005) found organizational commitment increased when employees perceive organizational leaders as utilizing the dimension collegiality of the CLS, which included investing in the workforce by being heart lifters, listening to concerns, and creating opportunities. The current findings corroborated the findings of Joaquín and Park (2013) who reported federal agencies cultures that were collegial (i.e., with decentralized organizational structures of specializations) tend to have employees with greater demonstrated commitment; but extend that research to all three dimensions of the CLS concept. The current findings corroborate the findings of Caldwell et al. (2010), who demonstrated organizational leaders' that are perceived as utilizing the dimensions of collegiality of the CLS and the values of trustworthiness and morality generate long-term organizational commitment. The current findings also support the findings of Brundrett (1998) and Hatfield (2006), who determined collegiality among employees' offers benefits, which included increased organizational commitment. The findings of the current research also generally support the research of Shrifian (2011) and Adhikari (2010), who demonstrated the collegial leadership methods in an academic culture increase organizational effectiveness, which has been shown to be related to employees' organizational commitment (Ciulla, 2006; Freedman, 2012); but extend those researchers' findings to positively impact employee satisfaction outside of academia to US federal agencies.

Facilitative leadership, distributed power, and organizational commitment. The current findings support the results of Boyatzis and McKee (2006) who determined organizational commitment is generated when organizational leaders are perceived as facilitators of collaboration and relationships. Similar to the findings in the current study,

Akert and Martin concluded that both the distributed power and facilitative leadership aspects would increase conversation and participation among and between employees and leaders; and leaders, who utilized both the distributed power and facilitative leadership approach created trust, increased commitment, and motivated performances. The current findings also corroborate the findings of Sabir et al. (2005), who demonstrated leaders that utilized aspects of the dimensions distributed power and facilitative leadership of the CLS positively impact organizational commitment. The findings of the current research also generally support the research of O'Connor and White (2011) who examined mixed university cultures and found the utilization of the CLS dimension distributed power of positively influences organizational effectiveness, which has been shown to be related to employees' organizational commitment (Ciulla, 2006; Freedman, 2012); but the current findings extend the research outside of academia to US federal agencies.

Evaluation of findings in the context of the study problem. The general problem was that federal employee satisfaction ratings of their leadership and workplace decreased to its lowest levels government-wide, since 2003 (PPC, 2012). However, generalization of previous CLS research findings to federal agencies was prohibited because of differences in organizational structure, taxpayers as stakeholders, public service oriented missions, and funding methodology of federal agencies (Shah, 2011). The specific problem was that before suggestions to promote the CLS to foster employee satisfaction in federal agencies could be promulgated an understanding of the relationship between the CLS dimensions of collegiality, facilitative leadership, and distributed power, employee satisfaction, and organizational commitment within federal agencies

was required. The current findings support the existing literature about CLS dimensions, and extend such findings to federal agencies, addressing the study problem.

Summary

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment within federal agencies. Participants were 122 federal government employees. Correlation analyses revealed eight statistically positive significant relationships between, (1) collegiality and employee satisfaction, (2) distributed power and employee satisfaction, (3) facilitative leadership and employee satisfaction, (4) the combined dimensions collegiality, distributed power, and facilitative leadership of the CLS and employee satisfaction, (5) collegiality and organizational commitment, (6) distributed power and organizational commitment, (7) facilitative leadership and organizational commitment, and (8) the combined dimensions collegiality, distributed power, and facilitative leadership of the CLS and organizational commitment.

To evaluate the study research questions, eight multiple regression models for the predictive variables were created to examine the three dimensions of the CLS to determine how well the variables predicted employee satisfaction (4-models) and organizational commitment (4-models). The findings of the current research showed that when combined, the dimensions of collegiality, distributed power, and facilitative leadership (of the CLS) can predict employee satisfaction and organizational commitment. In addition, each of the three variables separately can predict employee satisfaction and organizational commitment and the two null hypotheses were rejected.

Information about how the current findings compared to the literature was provided in the evaluation of findings section. As previous researchers have indicated and this study supported research demonstrating that the dimensions collegiality, distributed power, and facilitative leadership of the CLS positively affected employee satisfaction and organizational commitment (Adhikari, 2010; Akert & Martin, 2012; Ansell & Gash, 2012; Brundrett, 1998; Busher & Blease, 2000; Hatfield, 2006; Lazega & Wattedled, 2011; Loeffler et al., 2010; Mascal et al., 2008; Naidoo et al., 2012; Shin et al., 2012; Singh, 2013). As most of the previous research was conducted in academic cultures, the current findings not only support the previous research, but extend it to a sample of federal employees.

Chapter 5: Implications, Recommendations, and Conclusions

The general problem was that federal employee satisfaction ratings of their leadership and workplace decreased to its lowest levels government-wide, since 2003 (PPC, 2012). For three consecutive years, federal employees' satisfaction and commitment had declined to 57.8% (PPC, 2013). Researchers have shown that employees of ineffective leaders are unsatisfied and lack commitment (Brollier, 1985; Dobbins & Russell, 1986; Lakshman, 2008; Yukl, 2012). Based on research of federal government employees, the number one reason an individual left their job was due to their respective organizational leadership (GAO, 2012). The federal government's ineffective leadership equates to billions of avoidable costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover (GAO, 2012).

Researchers studying strategies to promote effective leadership behaviors have demonstrated a relationship between the dimensions collegiality, facilitative leadership, and distributed power of the CLS, employee satisfaction, and organizational commitment in various organizational cultures (Adhikari, 2010; Howze, 2003; Shrifian, 2011). The CLS has been shown to be essential for positively fostering academic cultures and influencing academic employees (Bolin, 2000; Christopher, 2012; Singh, 2013; Shrifian, 2011); and Adhikari (2010) found fostering CLS dimensions increase organizational effectiveness in hotels and restaurants. However, generalization of previous research findings to federal agencies was prohibited because of differences in organizational structures, taxpayers as stakeholders, public service-oriented missions, and funding methodology of federal agencies (Shah, 2011). Researchers suggested that information

was needed to provide an enhanced understanding of the CLS influences on employee satisfaction (Naidoo, Muthukrishna, & Hobden, 2012); and organizational commitment within other populations (Giffords, 2009; Singh, 2013). Accordingly, the purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment within federal agencies.

The population of the study was approximately 316,700 federal government employees throughout the US. The sample of the study was 122 participants, which exceeded the minimum of 107 as deemed necessary by a priori G*Power analysis to achieve statistical power of .05. The study participants included full-time federal government employees between the ages of 18 and 65 throughout the US. The predictor variables collegiality, facilitative leadership, and distributed power of the CLS were measured with already existing instruments. Collegiality was measured with the Collegiality Scale (CS) developed by Hoy et al. (2003), which provided statistical data about employees' perception of leaders' portrayal of collegiality; as well as employees' perceptions of colleagues' collegiality. Facilitative leadership was measured with the Facilitative Leadership Scale (FLS) developed by Hirst et al. (2004) that yielded statistical data about leaders' behaviors in facilitating and promoting collegiality within the workplace. Distributed power was measured with the Distributed Power Scale (DPS) developed by Slattery and Goodman (2009), and represented employees' perception of distributed power within federal agencies. To gather statistical data about employee satisfaction, participants completed the employee satisfaction scale (ESS) developed by Andrews and Withey (1976). Participants also completed the organizational commitment

scale (OCS) developed by Marsden et al. (1993) that provided information about the degree of employees' commitment to their organization. Descriptive analyses included calculation of variable means, standard deviations, and graphs for each of the study variables. Inferential analyses included multiple regression analyses to determine the predictive relationship of the CLS dimensions collegiality, facilitative leadership, and distributed power (predictor variables) on employee satisfaction and organizational commitment (criterion variables).

Potential limitations to this study included the possibility that only utilizing the quantitative approach may have obscured other employee satisfaction and organizational commitment issues, which could have resulted in incomplete solutions (Atieno, 2009; Thamhain, 2014). In order to address this limitation, the selected variables represented the important and salient components; however, limiting the study to the selected variables means not encapsulating the full range of variables, which could be related to employee satisfaction and organizational commitment (Thamhain, 2014; Trochim & Donnelly, 2008). Another possible limitation was participant's possible lack of honesty, which may or may not have reflected bias and assumption. Response bias occurs when participants respond to questions based on their idiosyncrasies and personal experiences, consciously or unconsciously distorting the truth (Spector, 2004; Villar, 2008). In addition, participants' subjective perceptions cannot be eliminated; therefore, in order to address those limitations, repeated measures were included in an effort to decrease participants' sensitivities (Vaitkevicius & Kazokiene, 2013). Also, the study participant pool consisted of employees from a variety of federal agencies, with various experiences, ages, education, and leadership levels (Trochim & Donnelly, 2008).

The study population was delimited to full time US federal employees. The objective of this delimitation was to enable the results of this study to be generalizable to federal government in terms of employee satisfaction and organizational commitment. Restricting participation to federal employees ensured the participants had the requisite experience and knowledge to fully respond to the study questions. This chapter provides information about the study implications, recommendations, and conclusions.

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment within federal agencies. Previous researchers have shown that the attributes of the three CLS dimensions positively affect employee satisfaction, employee productively, employee collegiality, and organizational commitment (Akert & Martin, 2012; Bagilhole, 2012; Bergman, 2012; Bush & Glover, 2013; Busher & Blease, 2000; Christopher, 2012; Jarvis, 2012; Hatfield, 2006; Ho, 2010; Husarik & Wynkoop, 1974; Lazega & Wattedled, 2011; Meyer, 2007; Naidoo et al., 2012; O'Connor & White, 2011; Shah & Abualrob, 2012; Shrifian, 2011; Singh, 2013; Thorpe & Kalischuk, 2003). Notable theoretical and empirical support was found confirming the dimensions collegiality, distributed power, and facilitative leadership of the CLS or aspects thereof, as critical components of effectiveness, employee collegiality, and organizational commitment within academic institutes (Busher & Blease, 2000; Howze, 2003; Jarvis, 2012; Shrifian, 2011); and Adhikari (2010) found CLS increased organizational effectiveness in hotels and restaurants. In addition, Aasen and Stensaker (2007) claimed leadership training programs on the CLS would be valuable tools in modernizing educational institutes.

However, after reviewing the literature it was determined that the empirical research did not include findings on the correlations between the three CLS dimensions of collegiality, distributed power, and facilitative leadership with employee satisfaction and organizational commitment within federal agencies. Researchers called for information to extend the CLM in order to gain an enhanced understanding of the CLS applicability in nonacademic organizations as well as extend the model to new populations (Singh, 2013). It was anticipated that such information, focusing on the CLS in a federal culture, could lead to strategies to augment effective leadership, which could increase federal employee satisfaction ratings (PPC, 2013).

In the current research, the CLS refer to the dimensions of collegiality, distributed power, and facilitative leadership. The CLS encompasses the social constructs related to organizational culture, friendliness, and social connection (Hatfield, 2006); is a leadership and power relationship model (Davis, 1968; Jarvis, 2012); and consists of distributed power; facilitation of employee collaboration and cooperation; encouragement of employee cooperation and sharing of resources; and demonstration of collegiality behaviors of mutual trust, respect, and friendliness (Howze, 2003). Collegiality was defined as employee involvement in managing their respective department and organization (Turner & Willis, 1981); and includes the social behaviors amongst and between leaders and employees, which positively influences cooperation and culture within the organizational (ten Brummelhuis et al., 2010). Collegiality is genuine and open employee-to-employee or supervisor-to-employee interactions (Hoy, Hoffman, Sabo, & Bliss, 1996; Hoy & Tarter, 1997), and collegiality is displayed when leaders and employee are able to speak freely, but remain supportive, and receptive to others

thoughts. Distributed power was defined as leaders sharing decision-making authority with employees (Bergman et al., 2012; Kok et al., 2009; Shrifian, 2011), instead of providing instruction and direction leaders support and guide employees in the decision making process (Bush, 2000); and distributed power includes leaders working with many employees, which they are not directly responsible for appraisal in collegial group (Shrivastava & Nachman, 1989). Facilitative leadership was defined as leaders' behaviors that assist and support positive relationships between employees,' open communications and expression of ideas, and sharing of resources (Davis, 1968; Hirst et al., 2004); and includes leaders ensuring the appropriate platforms, experts, and employees' professional autonomy are established to permit employees to operate collaboratively with colleagues and other leaders within organizations (O'Connor & White, 2011). Employee satisfaction was defined as a positive, agreeable, and enjoyable feeling regarding the assessment of one's work or experiences within the workplace (Locke, 1976). Organizational commitment is founded on commitment behaviors (Mowday et al., 1979); organizational commitment is demonstrated when employees choose to stay and forego leaving the organization as well as choose to association themselves with the organization (Mowday et al., 1979).

Implications

Research questions one. Research question one asked: To what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction in employees of the federal government? The corresponding null hypothesis was collegiality, facilitative leadership, and distributed power of the CLS does not predict employee satisfaction in employees of the federal government. The findings

indicated that the three CLS dimensions of collegiality, distributed power, and facilitative leadership are significant predictors of employee satisfaction in employees of the federal government and that use of these dimensions by leaders predicted employee satisfaction. Therefore, the null hypothesis was rejected.

The findings of the current investigation that the three CLS dimensions of collegiality, distributed power, and facilitative leadership separately, as well as combined, are significant predictors of employee satisfaction may imply federal leaders are not sufficiently utilizing the three CLS dimensions as part of their daily interaction with employees. Several researchers have found various leadership styles and leaders' behaviors to impact employee perceptions, thereby influencing employee satisfaction (Brundrett, 1998; Hatfield, 2006; Jarvis, 2012; Sakiru et al., 2013; Shrifian, 2011; Solberg et al., 2012). The significant implication from this investigation is federal leaders' demonstration of the three key CLS dimensions of collegiality, distributed power, and facilitative leadership can create just such a positive impact (Heponiemi et al., 2014) on employee satisfaction and organizational commitment.

Previous researchers demonstrated employee satisfaction was influenced by employees' experiences and interactions with organizational leaders and colleagues within their respective organizations (Locke, 1995; van den Pol-Grevelink et al., 2012). For example, Sakiru et al. (2013) found employee satisfaction to be contingent upon their perception of leaders' demonstrated behaviors towards them. However, Shah (2011) indicated that differences related to organizational structure, taxpayers being stakeholders, their public service oriented missions, and funding methodology within federal agencies, make generalization of previous research findings to this sector

prohibited. The findings of the current study do support the previous literature; however, the study results indicated that research conducted within academia may be generalizable to federal government employees. Based on both the current research and previous literature, it can be concluded that employees who have a positive perception of their leaders and a high employee satisfaction score, had leaders who demonstrate the CLS in their daily activities and behaviors.

The current research demonstrated the dimension of employee collegiality was a significant predictor of employee satisfaction. Regarding the particular dimension of collegiality, researchers have found that both leaders and employees consider it critical for employee satisfaction (Brundrett, 1998; Hatfield, 2006). Indeed, collegiality explained a significant percentage of the variance (41.6 %) in employee satisfaction. Collegiality encompasses the values of trust, friendliness, and fairness (Dubrow, 2004; Watt, 2005); as well as social skills (Singh, 2013). The findings of the current investigation suggest when federal leaders demonstrate the CLS dimension of collegiality behaviors such as higher social skills, employees are more likely to experience increased employee satisfaction. Accordingly, it is critical for federal leaders to ensure employees receive support from colleagues (Loeffler et al., 2010).

The findings of the current investigation imply the CLS dimension of facilitative leadership is a critical aspect of employee satisfaction in federal employees. The current findings also indicated that facilitative leadership, when combined with employee collegiality is a significant predictor of employee satisfaction, responsible for a significant percentage of the variance (59.3 %) in employee satisfaction. The combined dimensions are 12.3% more significant - and more significant than both variables alone.

The current findings and those of past researchers also imply that federal leaders, who demonstrate the CLS dimension facilitative leadership behaviors will positively influence employee satisfaction. The current findings indicate that it is critical for federal leaders to not only utilize the CLS dimension of collegiality but also incorporate facilitative leadership behaviors as part of their daily interaction with employees.

Previous researchers indicated the CLS dimension of distributed power is a critical component in enhanced employee satisfaction in academia (Freedman, 2012; Jarvis, 2012; Shrifian, 2011; Singh, 2013). In the current investigation, the CLS dimension distributed power was shown to be a critical component in employee satisfaction in federal employees. In accordance with the previous literature, it is assumed that federal leaders who demonstrate aspects of distributed power such as: leaders collaborating with employees prior to formally reaching an obligatory decision: leaders ensuring every employee's opinion, and thoughts are considered in the decision-making process (Heponiemi et al., 2014; Jarvis, 2012; Naidoo et al., 2012; Singh, 2013); and providing trust and autonomy to employees (Jarvis, 2012; Naidoo et al., 2012); would have employee's with high satisfaction scores.

The current investigation demonstrated that the three CLS dimensions employee collegiality, facilitative leadership, and distributed power combined are significant predictors of employee satisfaction and are responsible for a sizeable percentage of the variance (60.0 %) in employee satisfaction. The three CLS dimensions combined were even more significant predictors of employee satisfaction than either of the variables as single constructs. The current findings suggest that it is critical for federal leaders to engage in all three CLS dimensions to increase employee satisfaction. The findings about

the combined effects of CLS dimensions on employee satisfaction supported those of Lazega and Wattebled (2011), but extend it to a new population of federal employees.

Research question two. Research question two asked: To what extent, if any, does collegiality, facilitative leadership, and distributed power of the CLS predict organizational commitment in employees of the federal government? The corresponding null hypothesis was: collegiality, facilitative leadership, and distributed power of the CLS does not predict organizational commitment in employee of the federal government. The findings indicated that these three CLS dimensions are indeed predictors of organizational commitment with federal government employees, and that utilization of these dimensions by leaders is a predictor of organizational commitment. Therefore, the null hypothesis was rejected.

Previous researchers have demonstrated leadership styles and leaders' behaviors impact employees' perceptions, which were in turn shown to influence organizational commitment (Devos & Bouckenoghe, 2009; Freedman, 2012; Jarvis, 2012; Rehman et al., 2012; Sabir et al., 2011; Secretan, 2005; Shrifian, 2011; Singh, 2013). Previous researchers have also demonstrated that collegiality, distributed power, and facilitative leadership of the CLS positively impact organizational commitment in academic settings. Although Shah (2011) suggested generalizing previous academic findings to federal agencies may not be appropriate due to differences related to federal agencies' organizational structure, having taxpayers as stakeholders, their public service oriented missions, and funding methodology; the current findings imply that the previous research can be generalized to federal government employees. The current research along with the results of previous researchers implied that the dimension of employee collegiality is a

significant predictor of organizational commitment in federal agencies. Accordingly, it is critical for federal leaders to encourage collegiality amongst and between employees to increase organizational commitment.

The current findings also demonstrated leaders' utilization of facilitative leadership predicted organizational commitment in federal employees. That is, based on the current results and researchers' previous finding, it can be implied the CLS dimension of facilitative leadership is a critical aspect of organizational commitment (Boyatzis & McKee, 2006) for all types of organizations; and that federal leaders should be encouraged to utilize the CLS dimension of facilitative leadership behaviors, which may assist and support positive relationships between employees, open communications, expression of ideas, and sharing of resources (Davis, 1968; Hirst et al., 2004); and ensure the appropriate employee autonomy and collaborative interactions are made available (O'Connor & White, 2011); in order to positively impact organizational commitment within federal agencies.

Based on the current findings it is also suggested the CLS dimension of distributed power is a critical component in enhanced organizational commitment in federal agencies as well as in academic settings (Brundrett, 1998; Dipaola & Guy, 2009; Hatfield, 2006; Kantabutra & Rungruang, 2012). In particular, the findings of the current investigation and the results of past research may imply that when organizational leaders provide employees with a sense of belonging through distributing power it may facilitate their willingness to self-sacrifice time and efforts to ensure organizational effectiveness, which is related to organizational commitment (Van Dijke & Mayer, 2012). Therefore, similar to previous findings it can be assumed that federal employees who scored high for

distributed power perceived that their leaders collaborated with them, and that this in turn increased their organizational commitment rating (Freedman, 2012; Jarvis, 2012; Shrifian, 2011; Singh, 2013). Based on current and past findings, federal leaders should be encouraged to provide employees with the autonomy to make decisions as it would increase their organizational commitment (Jarvis, 2012; Naidoo et al., 2012).

The combining of CLS dimensions was also found to be a significant predictor of organizational commitment in federal employees. The current findings support the previous research (Basford et al., 2012, Boyatzis & McKee 2006, Park & Rainey 2008, Secretan 2005); but also extend it to a new population of federal employees suggesting generalization of the previous CLS literature in academia is generalizable to federal employees.

Implications in the context of the study problem. The general problem was that federal employee satisfaction ratings of their leadership and workplace had decreased to its lowest levels government-wide, since 2003 (PPC, 2012). However, generalization of previous research findings to federal agencies was prohibited because of differences in organizational structure, taxpayers as stakeholders, public service oriented missions, and funding methodology of federal agencies (Shah, 2011). The current findings suggest that concerns expressed by Shah (2011) were erroneous and that the existing CLS literature in academia can be extended to other institutions such as federal agencies.

The findings of the current research indicated that federal leaders' utilization of the CLS dimensions of collegiality, distributed power, and facilitative leadership significantly predict employee satisfaction and organizational commitment. The results suggested that not only can the utilization of CLS dimensions positively impact employee

satisfaction and organizational commitment, but when combined they have a more significant impact than either variable alone. Based on the current results and past findings it may be implied that federal leaders have the responsibility to ensure the organizational mission is successfully accomplished (Basford et al., 2012; Caldwell et al., 2010). Based on the current findings it is critical that federal leaders utilize the three CLS dimensions of collegiality, distributed power, and facilitative leadership to not only increase employee satisfaction but also employees' organizational commitment.

The findings of the current investigation are significant because they have practical ramifications. That the three CLS dimensions collegiality, distributed power, and facilitative leadership are significant predictors of employee satisfaction and organizational commitment may lead to strategies to augment effective leadership, and thereby assist federal leaders in addressing the issues of significant and decreased employee satisfaction and organizational commitment ratings. Additionally, the study findings may be used to enhance federal government leaders' understanding of the impact of promoting the CLS or aspects of the CLS, on employee satisfaction and organizational commitment.

The utilization and implementation of the CLS or aspects thereof within organizations can stimulate employee satisfaction and organizational commitment. Organizational leaders possess great responsibility, as they have control over the direction of the organization and the activities employees undertake. That is, based on the findings of the current investigation it can be implied that federal leaders should actively recognize and implement the value of the three CLS dimension. The various hierarchical

levels of organizational leadership behaviors can either assist or hamper the organizational strategy as well as leadership effectiveness (O'Reilly et al., 2012).

Contribution to existing literature. The current research findings that the dimensions of collegiality, distributed power, and facilitative leadership of the CLS significantly predict employee satisfaction and organizational commitment are consistent with previous qualitative and quantitative studies. However, the current findings are significant because the effects of CLS dimensions on employee satisfaction and organizational commitment had not been investigated in federal agencies, and extend the CLS literature to a non-academic organization. The current findings also extend the literature to include evidence that the three CLS dimensions collegiality, distributed power, and facilitative leadership are significant predictors of employee satisfaction and organizational commitment alone, and even more so when the three dimensions are combined.

Recommendations

Recommendations for practice and future research are provided. The practical recommendations address the general problem that federal employee satisfaction ratings regarding their leadership and the workplace decreased to its lowest levels government-wide, since 2003 (PPC, 2012). The recommendations for future research are based on the findings, limitations, and delimitations of the current research.

Recommendation for practice. The lack of effective leadership within federal agencies created considerable challenges, as it negatively impacted productivity and leaders' ability to meet mission goals (GAO, 2013). According to GAO (2012), the federal government's ineffective leadership has equated to billions of dollars in avoidable

costs associated with employee inefficiencies, duplication of efforts, and increased recruitment and development as a result of employee turnover. Some agencies reported difficulties in maintaining skilled employees, providing training and professional development opportunities, and effectively increasing employee morale (GAO, 2014). In addition, federal leaders reported challenges with the continuous decline in leadership effectiveness, and federal employees express overall dissatisfaction, lack of commitment due to lack of resources, lack of empowerment, and concern over issues of fairness (GAO, 2013). Based on the current findings, it is recommended that federal government leaders construct strategies and training programs that include the utilization of the CLS dimensions of collegiality, distributed power, and facilitative leadership as a method to increase employee satisfaction and organizational commitment. This recommendation supports previous suggestions to promote facilitative leadership (Ansell & Gash, 2012).

The current findings showed the utilization of the CLS dimension of collegiality is a significant predictor of employee satisfaction and organizational commitment amongst federal government employees. Based on these findings and previous research, it is recommended that federal government leaders make collegiality a standard expectation in the organizational culture. One way to achieve this is with the cultivation of collegiality-related policies and evaluation criteria for both leaders and employees to increase employee satisfaction and organizational commitment within federal agencies. In academic cultures, collegiality is an expected part of the organizational culture although the concept is somewhat ambiguous (Freedman, 2012; Loeffler et al., 2010). According to Parhizgar (2012), both professors and administrators are responsible for collegiality, and should therefore display citizenship behaviors, and conduct themselves

in an ethical manner, thereby; creating and maintaining relationships among colleagues, fostering trust and instilling confidence.

It is also recommended that training on employee and supervisor collegiality be provided within federal agencies. Employee collegiality has been shown to be fundamental for cultivating positive organizational cultures and employee morale (Hatfield, 2006; Katz & Kahn, 1978; Watt, 2005). The previous literature suggests collegiality among employees offers proven benefits, which include increased employee satisfaction and organizational commitment (Brundrett, 1998; Hatfield, 2006), and the current findings suggest that implementing such strategies within federal agencies may positively impact the plummeting ratings of leaders and the workplace in such settings.

Based on the current and previous findings, it is recommended that federal government leaders also distribute power to employees, and implement power-sharing to increase employee satisfaction and organizational commitment. In addition, it is recommended that US federal leaders include in training and the implementation and utilization of distributed power as part of standard practice. The involvement of employees is critical to organizational effectiveness, and as Meyer (2007) discovered distributed power requires employee participation as part of the decision making process to maintain confidence in the organizational leadership. Based on the findings of this study and those of past researchers, the inclusion of distributed power of the CLS should have a positive and significant impact on employee satisfaction and organizational commitment. In complex organizations, such as the federal government, the structure may provide for various effective forms of power sharing where clearly delineated roles and responsibilities are provided to employees (Jarvis, 2012; Adhikari, 2010). Moreover,

it is recommended that federal leaders ensure the organizational culture permit employees to collegially communicate amongst and between colleagues and leaders all issues or concerns, freely (Adhikari, 2010; O'Connor & White, 2011).

Based on the current and previous findings, it is recommended that US federal leaders similarly include facilitative leadership as a standard practice to increase employee satisfaction and organizational commitment within federal agencies. In addition, and in accordance with previous suggestions from different industries, it is recommended that facilitative leadership be considered an in-house mentoring and training method to increase employee knowledge, collegiality, determination, and motivation (Howze, 2003; Hoy et al., 2002; Shrifian, 2011).

Based on the current and previous findings, it is recommended that federal government leaders utilize the CLS dimensions combined as a method to increase employee satisfaction and organizational commitment. Moreover, it is recommended that strategies and training programs should include the important aspects of the CLS such as collaboration, and positive collegial engagement, which have been found to increase organizational effectiveness, remove perceived limitations, and raise product quality (Mukhtar, 2011; Raelin & Coghlan, 2006).

Recommendation for future research. Based on the current findings, limitations, and delimitations of the current research it is recommended that future researchers conduct a qualitative study that focus on other possible positive and negative impacts of the variables of collegiality, distributed power, facilitative leadership of the CLS within federal agencies, outside employee satisfaction and organizational commitment. Next it is recommended that researchers examine whether organizational

structure directly impact the CLS dimensions collegiality, distributed power, facilitative leadership predictability on employee satisfaction and organizational commitment. This recommendation is aligned with the research of Shah (2011) who developed and validated a collegiality scale to measure collegiality in schools; and the Shrifian (2011) that found the CLS included both an organizational structure and a leadership methodology.

The results may be better understood if future researcher examined the three CLS dimensions of collegiality, distributed power, and facilitative leadership to determine if they are predictors of employee satisfaction and organizational commitment in populations such as the food services, medical services, and entertainment industries. Finally, based on the findings of the current study, it is recommended that future researchers focus on the three CLS dimensions of collegiality, distributed power, and facilitative leadership in relation to the various and specific aspects of employee satisfaction and organizational commitment. This recommendation is in line with Lorber and Skela (2012) who determined there are many levels of employee satisfaction including those relating to: work environments, relationships amongst and between colleagues and leaders, salaries, fairness of promotions, job security, responsibilities and work schedule; and Meyer, Allen, and Smith (1993) and Mowday et al.'s (1979) that demonstrated there are various components of commitment.

Conclusion

The purpose of this quantitative non-experimental predictive correlational study was to explore how the dimensions of collegiality, facilitative leadership, and distributed power of the CLS predicted employee satisfaction and organizational commitment in

employees working in federal agencies. The findings of the current investigation indicated that the three CLS dimensions are significant predictors of employee satisfaction and organizational commitment in a new population, federal government agencies. The findings of the current investigation are significant because of the practical ramifications and contribution to literature. The current research demonstrated that implementation of the three CLS dimensions may lead to strategies to augment effective leadership, which may imply federal leaders have the ability to increase employee satisfaction and organizational commitment ratings.

There were eight recommendations made for practice. Overall, it was recommended for practical application that all hierarchical levels of organizational leadership should utilize the CLS dimensions of collegiality, distributed power, and facilitative leadership and generate training programs for all employees on the various aspects and attributes of the CLS. Next, it was recommended that federal government leaders make collegiality a standard expectation in the organizational culture, through the cultivation of collegiality-related policies and evaluation criteria for both leaders and employees. It was also recommended that training on employee and supervisor collegiality be provided within federal agencies. In addition, it was recommended that federal government leaders distribute power to employees and include training programs to assist leaders with implementation. It was recommended that federal leaders ensure the organizational culture permit employees to collegially communicate all issues or concerns amongst and between leaders and colleagues. It was also recommended that US federal leaders include facilitative leadership as a standard practice, which can increase employee satisfaction and organizational commitment within federal agencies. Moreover,

it was recommended that facilitative leadership be considered as an in-house mentoring and training method that increases employee knowledge, collegiality, determination, motivation, employee satisfaction, and organizational commitment.

There were four recommendations for future researchers. First, it was recommended that future researchers conduct qualitative studies that focus on other possible positive and negative impacts of the variables collegiality, distributed power, and facilitative leadership of the CLS in federal agencies, outside employee satisfaction and organizational commitment. Second, researchers were recommended to examine whether organizational structure has a direct impact on the variables collegiality, distributed power, and facilitative leadership of the CLS predictability on employee satisfaction and organizational commitment. It was also recommended that researchers explore the three CLS dimensions of collegiality, distribute power, and facilitative leadership to determine if they are predictors of employee satisfaction and organizational commitment in other non-academic populations, such as the food services, medical services, and the entertainment industries. Finally, it was recommended that future researcher focus on the three CLS dimensions of collegiality, distributed power, and facilitative leadership in relation to the various and specific components of employee satisfaction and organizational commitment.

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Appendixes

Appendix A: Collegiality Scale (CS)

Leader Collegiality (7-questions)

Response are obtained on a 4-point Likert-type scale where 1 = Rarely Occurs, 2 = Sometimes Occurs, 3 = Often Occurs, and 4 = Very Frequently Occurs.

1. Your supervisor explores all sides of topics and admits that others options exist.
2. Your supervisor treats all employees members as his or her equal.
3. Your supervisor is friendly and approachable.
4. Your supervisor lets employees know what is expected of them.
5. Your supervisor maintains definite standards of performance.
6. Your supervisor puts suggestions made by the employees into operation
7. Your supervisor is willing to make changes.

Employee Collegiality (7-questions)

1. Employees help and support each other.
2. Employees accomplish their jobs with enthusiasm
3. Employees respect the professional competence of their colleagues.
4. Employees in this organization exercise professional judgment.
5. Employees interactions between colleagues in other departments or centers are cooperative.
6. Employees “go the extra mile” with their customers.
7. Employees provide strong social support for colleagues.

Appendix B: Distributed Power Scale (DPS)

Shared Leadership (14 Questions)

Response are obtained on a 5-point Likert-type scale where 1 = Rarely Occurs, 2, 3, 4 = Sometimes Occurs, and 5 = Often Occurs.

In your agency or organization, do you

1. feel that you have opportunities to implement changes to practice or policy?
2. believe that all staff are treated fairly and as equals?
3. feel that time is taken to understand issues raised by all staff members?
4. feel silenced by others within your agency?
5. believe that challenges by less powerful staff members are taken seriously?
6. feel able to voice a different opinion from that held by the agency, without risk of retribution?
7. believe that attempts are made to act on the needs and goals expressed by all staff members?
8. feel that you have opportunities to represent your agency in the larger community? ...
9. feel powerless relative to others in your agency?
10. feel that you have opportunities to initiate or lead projects?
11. feel that power is concentrated at the top of the agency?
12. feel shut out of important discussions?
13. feel that differences among staff (e.g., cultural, age, ability, sexual orientation) are valued and respected?
14. believe that you have a say in the direction of the agency?

Appendix C: Employee Satisfaction Scale (ESS)

Job Satisfaction (5-questions):

Responses are obtained on a 7-point Likert-type scale where 7 = delighted, 6 = pleased, 5 = mostly satisfied, 4 = mixed (about equally satisfied and dissatisfied), 3 = mostly dissatisfied, 2 = unhappy, and 1=terrible.

1. How do you feel about your job?
2. How do you feel about the people you work with – your co-workers?
3. How do you feel about the work you do on your job – the work itself?
4. What is it like where you work – the physical surrounding, the hours, the amount of work you are asked to do?
5. How do you feel about what you have available for doing your job – I mean the equipment, information, good supervision, and so on?

Appendix D: Facilitative Leadership Scale (FLS)

Facilitative Leadership Measure (3-questions)

Responses are obtained on a 7 point Likert-type scale where 7 = delighted, 6 = pleased, 5 = mostly satisfied, 4 = mixed (about equally satisfied and dissatisfied), 3 = mostly dissatisfied, 2 = unhappy, and 1 = terrible.

1. Ensuring all team members have the opportunity to express their ideas and opinions.
2. Acting to ensure that conflicts aren't adversely affecting the team or its members.
3. Engaging in activities to build relationships within the team.

Appendix E: Organizational Commitment Scale (OCS)

Organizational Commitment (6-questions)

Response are obtained on a 4-point Likert-type scale where 1 = strongly disagree, 2 = disagree, 3 = agree, and 4 = strongly agree.

1. I am willing to work harder than I have to in order to help this organization succeed.
2. I feel very little loyalty to this organization (R)
3. I would take almost any job to keep working for this organization.
4. I find that my values and the organization's values are very similar.
5. I am proud to tell others that I am part of this organization.
6. I would turn down another job for more pay in order to stay with this organization

Appendix F: Demographic Questions

Demographic Questions (8-questions)

1. Are you currently a United States Federal Government Employee?
Yes/No
2. Select your current Federal Government employer.
3. How long have you worked for the Federal Government?
1 - 3 years; 4 - 5 years; 6 - 10 years; 11 - 20 years; 20 - 25 years; 26 - Over years
4. Please select your supervisory status.
Non-Supervisory; Team Lead; First-line Supervisor; Mid-Level Supervisor;
Senior Executive Service (SES)
5. What is your gender?
Female/ Male
6. What is your age?
18 to 25; 26 to 29; 30 to 39; 40 to 49; 50 to 59; 60 or older
7. What is your ethnicity? (Please select all that apply.)
American Indian or Alaskan Native; Asian or Pacific Islander; Black or African
American; Hispanic or Latino; White / Caucasian
8. What is the highest level of education you have completed?
High school; College graduate; Post Graduate Degree; Doctoral Graduate

Appendix G: Permission to use Collegiality Scale (CS)

From: Wayne Hoy <whoy@mac.com>
 Date: Mon, Oct 27, 2014 at 7:05 PM
 Subject: Re: Request For Permission To Use The Organizational Climate Index October 27, 2014
 To: Desiree Sylvester-Foust <sylvesterfoust@gmail.com>

Dear Desiree-

You have my permission to use the OCI in your doctoral research study. Adjust the wording to fit your purposes.

Wayne

Wayne K. Hoy
 Forecast Professor Emeritus in
 Education Administration
 The Ohio State University
www.waynehoy.com

7687 Pebble Creek circle, #382
 Naples, FL 34108
 Email: whoy@mac.com
 Phone: 328 595 5722

On Oct 27, 2014, at 10:55 AM, Desiree Sylvester-Foust <sylvesterfoust@gmail.com> wrote:

Wayne K. Hoy, Ph.D.
 Faculty Emeritus
 29 W Woodruff Ave
 Columbus, OH 43210
 Ed Studies Administration, The Ohio State University

Dear Dr. Hoy:

I am writing to request permission to use two dimensions of your Organizational Climate Index (OCI) in my doctoral research study. I am a doctoral candidate at Northcentral University located in Prescott Valley, AZ and my anticipated graduation date is June 6 2015. My research study is entitled: Exploring How the Collegial Leadership Style Predicts Employee Satisfaction and Organizational Commitment within Federal Agencies. I find that the dimensions collegial leadership and teacher professional behaviors of your survey instrument are perfect for the type of research study I'm seeking to accomplish. However, because my research will not be conducted within an academic culture, I will have to make a minor adjustment to your survey (the word principal replace with supervisor and teacher replaced with employee).

I thank you in advance for your assistance and I'm looking forward to your response to this request.

Sincerely,

Desiree E. Sylvester-Foust

Figure 12. Permission to use OCI

Appendix H: Permission to use Distributed Power Scale (DPS)



Shared Power Scale

PsycTESTS Citation:

Slattery, S. M., & Goodman, L. A. (2009). Shared Power Scale [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t24779-000

Test Shown: Full

Test Format:

For each of the 15 items, the response choices range from 1 (rarely) to 5 (often) with higher scores representing more shared power.

Source:

Slattery, Suzanne M., & Goodman, Lisa A. (2009). Secondary traumatic stress among domestic violence advocates: Workplace risk and protective factors. *Violence Against Women*, Vol 15(11), 1358-1379. doi: 10.1177/1077801209347469, © 2009 by SAGE Publications. Reproduced by Permission of SAGE Publications.

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Figure 13. Permission to use shared power scale

Appendix I: Permission to use Employee Satisfaction Scale (ESS)

From: dailfie@regent.edu <dailfie@regent.edu>
 Date: Tue, Oct 28, 2014 at 3:06 PM
 Subject: RE: Permission to Use
 To: Desiree Sylvre-Foust <sylverfoust@gmail.com>

Desiree:

If you are using the measures in the book for academic research, you do not have to obtain permission to use the scales. Simply cite the source in your work. If you are using for consulting resulting in commercial gain, you will need to obtain permission to reprint the items.

Dail Fields, PhD

Professor and PhD program Director

Regent University School of Business and Leadership

1000 Regent University Drive, Virginia Beach, VA 23464

Phone: 757-639-4370

<http://www.regent.edu/>

Regent University: Christian Leadership to Change the World.

From: Desiree Sylvre-Foust [<mailto:sylverfoust@gmail.com>]
 Sent: Tuesday, October 28, 2014 11:00 AM
 To: dailfie@regent.edu
 Subject: Permission to Use

Dr. Fields,

I am a doctoral candidate at Northcentral University located in Prescott Valley, AZ and my anticipated graduation date is June 6 2015. I am writing because I am trying to get permission to use two of the research instruments mentioned in your book "Taking the Measure of Work: A Guide to Validated Scales for Organizational Research and Diagnosis" (Frank Andrews and Stephen Withey's job satisfaction scale page 26 and Marsden, Kalleberg, and Cook's scale page 58). Can you please advise how I can obtain permission to use the both scales (Andrews and Withey are both deceased). If you have an email address that would be very helpful. Any information you provide is greatly appreciated.

I thank you in advance for your assistance and I'm looking forward to your response to this request.

Sincerely,

Desiree E. Sylvre-Foust

Figure 14. Permission to use employee satisfaction scale

Appendix J: Permission to use Facilitative Leadership Scale (FLS)



Facilitative Leadership Measure

Note: Test name created by PsycTESTS

PsycTESTS Citation:

Hirst, G., Mann, L., Bain, P., Pirola-Merlo, A., & Richver, A. (2004). Facilitative Leadership Measure [Database record]. Retrieved from PsycTESTS. doi: 10.1037/t16238-000

Test Shown: Full

Test Format:

The Facilitative Leadership Measure utilizes a 7-point scale where 1 = not at all well, 4 = moderately well, and 7 = extremely well.

Source:

Hirst, Giles, Mann, Leon, Bain, Paul, Pirola-Merlo, Andrew, & Richver, Andreas. (2004). Learning to lead: The development and testing of a model of leadership learning. *The Leadership Quarterly*, Vol 15(3), 311-327. doi: 10.1016/j.leaqua.2004.02.011, © 2004 by Elsevier. Reproduced by Permission of Elsevier.

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Figure 15. Permission to use facilitative leadership scale

Appendix K: Permission to use Organizational Commitment Scale (OCS)

From: Kalleberg, Arne L <arne_kalleberg@unc.edu>
 Date: Tue, Oct 28, 2014 at 11:46 AM
 Subject: RE: Permission to Use
 To: Desiree Sylvan-Foust <sylyverfoust@gmail.com>

Yes, that is fine.

Good luck with your research!

Arne Kalleberg

 Arne L. Kalleberg
 Kenan Distinguished Professor of Sociology
 Editor, *Social Forces*
 University of North Carolina at Chapel Hill
 919-962-0630
<https://arne.kalleberg.web.unc.edu>

From: Desiree Sylvan-Foust [sylyverfoust@gmail.com]
 Sent: Tuesday, October 28, 2014 11:31 AM
 To: Kalleberg, Arne L
 Subject: Permission to Use

Arne L. Kalleberg, Ph.D.
 University of North Carolina at Chapel Hill
 261 Hamilton Hall,
 Department of Sociology (CB # 3210)
 (919) 962-0630

Dear Dr. Kalleberg,

I am writing to request permission to use your organizational commitment scale in my doctoral research study. I am a doctoral candidate at Northcentral University located in Prescott Valley, AZ and my anticipated graduation date is June 6 2015. My research study is entitled: Exploring How the Collegial Leadership Style Predicts Employee Satisfaction and Organizational Commitment within Federal Agencies. I find that your survey instrument is perfect for the type of research study I'm seeking to accomplish.

I will use this survey only for my research study and will not sell or use it with any compensated or curriculum development activities.

I will include the copyright statement on all copies of the instrument.

I hope you find those terms acceptable. I thank you in advance for your assistance and I'm looking forward to your response to this request.

Sincerely,

Desiree E. Sylvan-Foust
 Doctoral Candidate

Figure 16. Permission to use organizational commitment scale

Appendix L: Invitation Email

Dear Colleagues,

My name is Desiree Sylver-Foust an employee at NASA in the Office of Procurement. I am also a doctoral candidate in the School of Business at Northcentral University. I am conducting research on the collegial leadership style influences on employee satisfaction and organizational commitment within federal agencies. The specifically focus is on your perception of collegiality among and between colleagues, and leaders, leaders' facilitative leadership behaviors, and leaders' distributed power behaviors, in the federal government.

The results of the research study will help to provide an enhanced understanding of the collegiality, distributed power, and facilitative leadership of the collegial leadership style influences on employee satisfaction and organizational commitment within the federal government. Data related to employee satisfaction, organizational commitment, and the collegial leadership style for federal government employees is of great importance for as federal employee satisfaction ratings may continue to decline and strategies to augment effective leadership may be incomplete. Such data can facilitate strategies to enhance the experiences and perceptions of the federal government employees.

I appreciate you volunteering your time to complete the questionnaire for my doctoral dissertation. As employees of a federal government agency, I realize you have many critical responsibilities. Your participation is 100% voluntary and all responses are strictly confidential. You will not be asked to identify your name or position. No one will know who is answered the survey, which is why e-mails are being sent. The results will be calculated by no individual participants' answers or names will be used in the final study.

The survey should only take less than 15 minutes of your valuable time to complete. It would be greatly appreciated, if you could please complete the survey by within the **Next Five Days**. Other phases of this research cannot be completed until the data collected from the questionnaire is analyzed. Again, the questionnaire should take no more than 15 minutes to complete. If you have any questions, please feel free contact me at any time: Desiree Sylver-Foust, email: sylverfoust@yahoo.com or cell phone (301) 842-7327.

Thank you.

To begin the survey, select the link below.

<http://www.surveymonkey.com/s/collegial>

Appendix M: Sample Social Media Recruitment Message

My name is Desiree Sylver-Foust a doctoral candidate at Northcentral University. I am conducting research on the collegial leadership style influences on employee satisfaction and organizational commitment within federal agencies. If you are a United States Federal Government Employee, I would like to invite you to participate. <http://www.surveymonkey.com/s/collegial>

The purpose of this quantitative non-experimental predictive correlational study is to explore how the dimensions collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies. The results of the research study will help to provide an enhanced understanding of the collegial leadership style influences on employee satisfaction and organizational commitment within the federal government.

Your participation is 100% voluntary and all responses are strictly confidential. You will not be asked to identify your name or position. You have the right to withdraw from the study at any time. If you have questions about your rights as a research participant, any complaints about your participation in the research study or any problems that occurred in the study, please contact the researchers. Or if you prefer to talk to someone outside the study team, you can contact Northcentral University's Institutional Review Board at irb@ncu.edu or 1-888-327-2877 ex 8014.

The survey should only take 15 minutes of your valuable time. If you have any questions, please feel free contact me: Desiree Sylver-Foust, email: sylverfoust@yahoo.com or cell phone (301) 842-7327.

Appendix N: Informed Consent Form

Title: Exploring How the Collegial Leadership Style Predicts Employee Satisfaction and Organizational Commitment within Federal Agencies

You are asked to read this consent form carefully and in its entirety. You, the participant, are allowed to print a copy of this consent form directly from this survey site.

Purpose. You are invited to participate in a research study being conducted for a dissertation at Northcentral University in Prescott Valley, Arizona. The purpose of this study is to investigate how collegiality, facilitative leadership, and distributed power of the collegial leadership style predict employee satisfaction and organizational commitment in federal agencies. There is no deception in this study. I am interested in your opinions and perceptions of your respective leaders and colleagues.

Participation Requirements. You will be asked to complete an on-line research questionnaire related to collegiality, facilitative leadership, and distributed power of the collegial leadership style and employee satisfaction and organizational commitment within your respective federal agency. The researcher plans to have 350 surveys completed by within two week before the data is compiled for the research study. If 350 responses are not completed within the two week period, the data collection process will continue until this number is reached. You will be asked to complete an on-line survey. The entire survey should take approximately 20 minutes to complete.

Research Personnel. The following person leads this research project and may be contacted at any time: Desiree Sylver-Foust, email: sylverfoust@yahoo.com or cell phone (301) 842-7327.

Potential Risk/Discomfort. Although there are no known risks in this study, some of the questions ask your perceptions and feeling regarding your workplace, leaders, and colleagues. You may discontinue the survey at any time and you may choose not to answer any question that you feel uncomfortable in answering.

Potential Benefit. No financial compensation or incentives will be provided to participants in the research study. At no time will participants be asked to pay for participation or purchase anything, as part of the research study. There are no direct benefits to participants for participating in this research study. The results will have scientific interest that may eventually be utilized by federal government leaders in an effort to foster effective leaders, as well as increase employee satisfaction and organizational commitment.

Anonymity/Confidentiality. The data collected in this research study will be and remain confidential. Participants' personal information, name, or any identifiers will not be associated with your responses. The original data collected will only be available to the researcher associated with the research study and will be used for educational and

publication purposes only. The confidentiality of the data will be maintained within allowable legal limits.

Right to Withdraw. Your participation in this research study is completely voluntary. Participants may withdraw from the study at any time without penalty. You may omit questions on the survey, if you do not wish to answer them. You may ignore the survey or discontinue the survey, at any time.

I would be happy to answer any question that may arise about the research study. Please direct your questions or comments to Desiree Sylver-Foust, email: sylverfoust@yahoo.com or cell phone (301) 842-7327.

If you have questions about your rights as a research participant, any complaints about your participation in the research study, or any problems that occurred in the study, please contact the researchers identified in the consent form. Or if you prefer to talk to someone outside the study team, you can contact Dr. Mary Blackwell dissertation chair at mblackwell@ncu.edu or Northcentral University's Institutional Review Board at irb@ncu.edu or 1-888-327-2877 ex 8014.

By marking in the box below, you acknowledge the voluntary participation in this research study. Such participation does not release the investigator(s), or institution from their professional and ethical responsibilities.

I HAVE READ THE INFORMATION PROVIDED ABOVE AND HAD MY QUESTIONS ANSWERED TO MY SATISFACTION. I VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY. I MAY PRINT OFF A COPY OF THIS CONSENT FORM DIRECTLY FROM THIS SURVEY SITE.

You will be directed to the on-line survey if you agree to participate by marking below:

- By marking this box I agree to participate in the survey described above and understand the nature, risks, and benefits of my completing this on-line research. I understand that my participation is completely voluntary and I may withdraw from the on-line research at any time.
- I do not agree to the terms of the consent form.

Appendix O: Sample Subsequent Invitation Email

Dear Colleagues,

I am sending this subsequent email to thank those that took that time to voluntarily participate in my doctoral study and for all those that have not completed the survey, please complete the survey, no later than Thursday, January 22, 2015. As you may remember from my previous email, my name is Desiree Sylver-Foust a doctoral candidate in the School of Business at Northcentral University. I am conducting research on the collegial leadership style influences on employee satisfaction and organizational commitment within federal agencies and as a federal government employee; I would like to invite you to participate. <http://www.surveymonkey.com/s/xxxxxx>

The purpose of this quantitative non-experimental predictive correlational study is to explore how the dimensions collegiality, facilitative leadership, and distributed power of the CLS predict employee satisfaction and organizational commitment within federal agencies. The results of the research study will help to provide an enhanced understanding of the collegial leadership style influences on employee satisfaction and organizational commitment within the federal government. Data related to employee satisfaction, organizational commitment, and the collegial leadership for federal government employees is of great importance for as federal employee satisfaction ratings may continue to decline and strategies to augment effective leadership may be incomplete. Such data can facilitate strategies to enhance the experiences and perceptions of federal government employees.

I appreciate you volunteering your time to complete the questionnaire for my doctoral dissertation. Your participation is 100% voluntary; you have the right to withdraw from the study at any time; and all responses are strictly confidential. You will not be asked to identify your name or position. No one will know who is answered the survey, which is why e-mails are being sent. The results will be calculated but no individual participants' answers or names will be used in the final study.

The survey should only take 15 minutes of your valuable time to complete. It would be greatly appreciated, if you could please complete the survey by within the **Next Five Days**. Other phases of this research cannot be completed until the data collected from the questionnaire is analyzed. Again, the questionnaire should take no more than 15 minutes to complete. If you have any questions, please feel free contact me at any time: Desiree Sylver-Foust, email: sylverfoust@yahoo.com or cell phone (301) 842-7327. <http://www.surveymonkey.com/s/xxxxxx>

If you have questions about your rights as a research participant, any complaints about your participation in the research study or any problems that occurred in the study, please contact the researchers identified in the consent form. Or if you prefer to talk to someone outside the study team, you can contact Northcentral University's Institutional Review Board at irb@ncu.edu or 1-888-327-2877 ex 8014.

Appendix P: CITI Certificate of Completion

COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI)
HUMAN RESEARCH CURRICULUM COMPLETION REPORT
 Printed on 10/20/2014

| | |
|------------------------|------------------------------------|
| LEARNER | Desiree Sylver-Foust (ID: 3225493) |
| DEPARTMENT | research with human subjects |
| EMAIL | irb@ncu.edu |
| INSTITUTION | Northcentral University |
| EXPIRATION DATE | 10/19/2016 |

| | |
|----------------------|----------------|
| BUSINESS | |
| COURSE/STAGE: | Basic Course/1 |
| PASSED ON: | 10/20/2014 |
| REFERENCE ID: | 14356890 |

| REQUIRED MODULES | DATE COMPLETED |
|--|----------------|
| Belmont Report and CITI Course Introduction | 10/20/14 |
| History and Ethical Principles - SBE | 10/20/14 |
| Defining Research with Human Subjects - SBE | 10/20/14 |
| The Federal Regulations - SBE | 10/20/14 |
| Assessing Risk - SBE | 10/20/14 |
| Informed Consent - SBE | 10/20/14 |
| Privacy and Confidentiality - SBE | 10/20/14 |
| International Research - SBE | 10/20/14 |
| International Studies | 10/20/14 |
| Internet-Based Research - SBE | 10/20/14 |
| Vulnerable Subjects - Research Involving Workers/Employees | 10/20/14 |
| Conflicts of Interest in Research Involving Human Subjects | 10/20/14 |
| Northcentral University | 10/20/14 |

For this Completion Report to be valid, the learner listed above must be affiliated with a CITI Program participating institution or be a paid Independent Learner. Falsified information and unauthorized use of the CITI Program course site is unethical, and may be considered research misconduct by your institution.

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 Director Office of Research Education
 CITI Program Course Coordinator

Collaborative Institutional
 Training Initiative
 at the University of Miami

Figure 17. CITI certificate of completion