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Assessment of Veterans Affairs Case Management Leadership

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In partial fulfillment of the requirements for the degree of Doctor of Philosophy, 2021

Dissertation Approval Form

Placeholder

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Dedication

This PhD dissertation is dedicated to the memories of Timothy Long and Deborah Studer. In countless and immeasurable ways their tragic losses, though a decade apart, were the motivation and inspiration for this research.

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Abstract

The Department of Veterans Affairs (VA) provides patient care, benefits, and services to Veterans of the U.S. armed forces and their families. The present research examined responses of Registered Nurses (RNs), Social Workers (SWs), and case managers to the VA All-Employee Survey (AES) in 2018 and 2019 regarding elements of leadership based on a Leader-Follower conceptual Framework (LF2). The LF2 addresses character, competence, context, and communication at the personal, interpersonal, team, and organizational psychosocial levels. A three phased study: (1) assessed questions similar to those used on the annual VA AES to determine whether the LF2 could be used to reliably categorize questions; (2) applied the LF2 to assess the items within the AES and categorized them into the leadership element indices; and (3) examined and compared the LF2 categorized responses of RNs, SWs, and case managers. Questions on the AES were focused on communication, personal, and organizational elements of leaders and followers, and do not focus on character, context, competence, interpersonal, or team elements of leaders and followers. RNs generally responded more positively than SWs on the AES; RN case managers and RN non-case managers responded similarly; and SW case managers generally responded more positively than did SW non-case managers. Most survey responses decreased in satisfaction and increased in burnout from 2018 to 2019 for all groups. These findings suggest that the AES should be reevaluated to ensure that it assesses information of interest to VA leadership. Future investigations should concentrate on why these patterns exist between RNs and SWs.

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Chapter One: Introduction and Background

Introduction

The mission of Veterans Affairs (VA) has been unwavering from its inception “to care for him who shall have borne the battle” (Lincoln, 1865, p. 2). Today the VA upholds this mission while developing into the largest and most wide-ranging federal healthcare system in the United States (National Center for Veterans Analysis & Statistics, 2017). To this end, the VA provides healthcare services to Veterans and active-duty service members (ADSM) in the United States (U.S.) Army, Navy, Air Force, Reserves, and National Guard (U.S. Department of Veterans Affairs, 2019b).

Following the wars in Iraq and Afghanistan, the number of Veterans cared for in more than 1400 VA facilities increased to approximately 10 million (Huang et al., 2017). By 2019 the number of Veterans receiving services in VA decreased to 4.89 million annually (National Center for Veterans Analysis and Statistics, 2019). The VA shifted from a robust and bustling world class healthcare system to one challenged by Veteran and public confidence. Specifically, the ability of VA leadership and staff to provide coordinated access to healthcare services was questioned, threatening the long-standing mission of the VA (Greenstone et al., 2019).

U.S. government reports of VA healthcare services from 2007 to 2019 revealed deficits in access to care and coordinated services for Veterans. Solutions to these reported shortfalls included legislative and fiscal support for case management programs and services (National Defense Authorization Act, 2008; U.S. Department of Veterans Affairs, 2018; U.S. Government Accountability Office, 2012a; Veterans Access to Care Act, 2014 & 2017; Veterans Affairs MISSION Act, 2018; Veterans Affairs Office of Inspector General Report, 2014; Veterans Affairs Testimony, 2019). Numerous, complementary, and overlapping case management

programs were initiated based on these reports and subsequent recommendations. Despite the addition of case management services, programs, and resources, Veterans continued to report dissatisfaction with the VA (Survey of Healthcare Experience of Patients, 2018). According to responses on the 2018 survey, more than 50% of Veterans indicated their top two complaints about the VA were a lack of timely access to healthcare and coordination of healthcare services.

Purpose

The purpose of the present research study was to provide insight into the leadership qualities of case managers by utilizing a Leader-Follower conceptual Framework (LF2) to assess the annual VA All Employee Survey (AES) questions. Analysis of the questions was to determine if the elements of leadership were addressed or if any meaningful gaps were identified in employee survey questions and responses. More specifically, a three-phased study was conducted: (1) to determine the interrater reliability of the LF2 when applied to questions similar to those of the AES; (2) to apply the LF2 for assessing leadership elements to the AES survey questions, and (3) to assess Registered Nurse (RN), Social Worker (SW), and case manager AES responses categorized by the LF2 elements. To broaden an understanding of the issues influencing VA care, relevant background and a thorough literature review was conducted. The following chapters describe: (1) a VA case management, VA employee survey, and leadership literature review; (2) the phased-study design utilizing a leadership conceptual framework for analyzing annual survey responses of VA RNs, SWs, and case managers; (3) the research methodology; (4) study results; and (5) study discussions and conclusions.

Background

National news in 2014 indicated VA had secret patient waiting lists which resulted in congressional inquiries and an Office of Inspector General (OIG) report that confirmed increased

Veteran wait times and adverse patient outcomes (Oppel & Shear, 2014; VA Office of Inspector General, 2014). After the OIG report, Congress passed the Veterans Access, Choice, and Accountability Act, VACAA, H.R. 3230, 206, and the Maintaining Internal Systems and Strengthening Integrated Outside Networks Act, VA MISSION Act, H.R. 5674, 104, §1703B (Veterans Access to Care Act, 2017; Veterans Affairs MISSION Act, 2018). Both laws focused on purchasing non-VA healthcare in the community by civilian healthcare providers to improve Veteran access to healthcare.

In a 2019 report by the Government Accountability Office (GAO), substantial nurse staffing shortages were identified at 172 VA medical centers. Recommendations of the GAO centered on enhanced workforce performance and emphasized the importance of recruiting and retaining qualified nurses. Multiple strategies to support nurse recruitment and retention were implemented, but these strategies were not evaluated for effectiveness (Veterans Affairs Testimony, 2019). A GAO report for managing collaborations between healthcare providers in the federal, military, and private sector settings identified employee-related factors such as competency, leadership, and trust (U.S. Government Accountability Office, 2012b).

In 2018, scientists from the VA Health Services Research and Development (HSR&D) Evidenced-based Synthesis Program conducted a literature review of care coordination models and frameworks to guide future care coordination program development and implementation (Peterson et al., 2018). The authors identified a lack of guidance for how to: (1) implement care coordination in healthcare systems, (2) develop interventions for improving care coordination, and (3) measure care coordination outcomes. Recommendations from the HSR&D review indicated research was needed to classify care coordination according to theory-based domains which included the context, communication skills, and competence of case managers. The use of

a theoretical framework was recommended to evaluate the effectiveness of case managers and the programs implemented.

The obligation to deliver healthcare in the private sector and in the VA may partially address the complaints regarding timely access to healthcare services for Veterans. However, the identification of VA network community-care providers has not been completely determined, with Third Party-Administrators contracted to manage and approve these providers. As a result, Veterans have reported non-payment to community care providers, all further complicating the care coordination of Veterans (Department of Veterans Affairs, 2019; Shane, 2018).

The anticipated number of transitions related to requirements of the MISSION Act has been reportedly higher than the 30% increase originally anticipated for 2019. In addition, as Veterans transition between healthcare systems, the communication of clinical findings has not been fully established, resulting in increased safety risks for Veterans as healthcare records are not transparent to providers (Rosen et al., 2018). The burden for VA case managers has increased due to the MISSION Act which compounds the preexisting and growing concern for the coordination of Veteran care (Greenstone et al., 2019).

Existing VA care coordination inefficiencies will be multiplied because of increased community appointments, community provider payment back-logs, and a lack of coordinated communication of clinical findings between providers. These changes and challenges are among the most complex and far-reaching in the recent history of the VA (Veterans Health Administration, 2019).

The cause and explanation for why VA care coordination continues to be unsuccessful in managing Veteran care remains unclear but will be compounded by legislative changes of 2017 and 2019, making a more precise understanding of the elements impacting VA case managers

critical. Compliance with the mandates of the MISSION Act will require an assessment of case management competence, staffing levels, and training needs to further grasp the issues to be addressed (Vantage Point, 2019). To initiate this understanding, a thorough review of the case management and the VA All Employee Survey (AES) literature from a leadership perspective was conducted. Publications about leadership theories, philosophies, and models also were examined and discussed relevant to conceptual frameworks for the research project.

In the following literature review, Chapter two describes the research methodology and includes the research questions and specific aims. Chapter three describes Phase I of the study design and provides the results and a discussion. Chapter four describes Phase II of the study design and provides the results and a discussion. Chapter five describes Phase III of the study design and provides the results and a discussion. Chapter six includes a general discussion including study implications and applications, limitations, and future recommendations.

Literature Review: Introduction

Adhering to the mission of the VA, case managers assure the best quality in health care services are coordinated for Veterans. Understanding and preparing for the challenges in VA care coordination requires a strategic organizational approach and systematic support. *A priori* knowledge and rational insight presumes that a study of case managers' behaviors, cognitions, and motivations will provide insight into the qualities needed to improve satisfaction and healthcare outcomes.

In the wake of Veteran complaints and subsequent formal government recommendations, changes followed which further affected care coordination services. The VA MISSION Act of 2018, while seen as a solution, presented new challenges to VA, RN and SW case managers, and Veterans navigating between the VA and private sector healthcare systems. A review of the VA

case management literature was required to determine how changes to care coordination programs were assessed and implemented from 2007 to 2019.

VA Case Management: Background

At the conclusion of World War II, RNs in the United States were employed as case managers to assure wounded Veterans received the treatments required for rehabilitation. Following this model, the support of recovery after injury and illness remained a primary function of registered nurse case managers in the private sector and VA for the decades that followed (Kalisch & Kalisch, 2004). A substantial shift in the practice of nursing and case management occurred in the mid-1980s when private insurers developed managed care programs intended to contain costs incurred by catastrophically ill and injured persons (Keeling et al., 2018).

Following the private sector model, VA case management programs focused on the severely ill and injured population during the Iraq and Afghanistan wars from 2003 through 2014. The literature from this period indicates that the focus on severe injuries led to a gap in care for individuals with invisible, but devastating, war wounds, including mild traumatic brain injury (TBI), post-traumatic stress disorder, and chronic pain (Lew et al., 2009). This clinical triad finding prompted a congressional VA directive for screening and care-plan development for any combat Veteran with a diagnosis of TBI (Veterans Health Administration Handbook 1172.04, 2018). The congressional mandate to evaluate Veterans for TBI and other comorbidities is an example of numerous changes, which ultimately led to redundancy in services and generated confusion in the case management of Veterans beginning in 2003 (National Defense Authorization Act, 2008; Veterans Access to Care Act, 2014 & 2017; Veterans Affairs MISSION Act, 2018).

VA Case Management: Scope of Practice

According to the Commission for Case Managers (CCM), the underlying principle for the practice of case management is that stakeholders benefit when patients reach their optimum level of wellness, self-management, and physical capability. Stakeholders include caregivers, healthcare providers, and health insurance entities. Case managers facilitate the achievement of patient wellness and autonomy through advocacy, assessment, education, and resource management, while ensuring the care provided is safe, effective, patient-centered, and equitable (Commission for Case Manager Certification, 2018).

Case managers in VA adhere to the CCM principles and must be competent in Veteran healthcare benefits and federal healthcare resource management while considering the Veteran's military service and enduring culture. VA case managers also work in a variety of clinical settings which include more than 1400 facilities throughout the 50 Contiguous United States and Hawaii, Alaska, American Samoa, Guam, the Philippines, Puerto Rico, and the Virgin Islands (U.S. Department of Veterans Affairs, 2018).

Interestingly, the CCM and the VA case management scope of practice demonstrates four areas highlighted in the leadership literature that include performance and proficiency in the domains involving character, competence, context, and communication (Callahan & Grunberg, 2019; Grunberg et al., 2018; Veterans Health Administration Directive 1110.04, 2019). VA case managers are predominantly RNs and SWs who collaborate with interdisciplinary healthcare team members due to the complex medical and psychosocial needs of the Veterans being served.

Survey data collected in 2018 indicate the number of RNs employed in VA was 65,263 and the number of SWs was 14,626 (National Center for Organizational Development, 2018). The exact number of RNs and SWs functioning as case managers was not specified in the 2018

report or reports prior to that date. The assignment of Veterans to case managers is based on the healthcare complexity of Veterans and their needs; however, no recommendations are made for case management-to-patient ratios (Veterans Health Administration Handbooks 1172.01, 2013; 1110.04, 2013; 1010.01, 2016). The VA AES questions specifically targeting case management services provided by RNs and SW was initiated in 2019.

Literature Review: Purpose

The purpose of the literature review was to critically examine publications of intersecting topics to gain insight related to case management leadership and the VA annual survey. The objective of the literature review was to assess the extent to which VA case managers functioned as leaders or in leadership roles. The rationale was that case managers who function as leaders would positively affect access to healthcare and the coordination of VA healthcare services.

In publications on “Leading Change,” Kotter (1996, 2012), argues that nearly 70% of all major organizational change efforts fail because a holistic, long-term approach is not utilized or sustained. In the 12 plus years of significant organizational change in VA care coordination, a single and identifiable universal approach for care coordination has not been determined or consistently utilized (Pew Research Center, 2017). According to the Leading Change theory, a key component to optimize success during change is coalition building. A care coordination coalition in VA would include case managers with enterprise-wide credibility and the leadership skills needed to effectively drive change (Kotter 2012). The Leading Change theory and the literature review guided further refinement of the central objective of the review, leading to the research questions.

Literature Review: Methods

The literature search required a two-phased approach for refinement of the question of interest. Terms encompassing case management, care coordination, outcome measures, and leadership were used to perform the initial literature search and included publications from the private sector and VA via PubMed and CINAHL search engines (Appendix A). This search generated 790 article titles with 146 duplications identified, resulting in 605 titles. A review of the 605 abstracts and titles revealed that less than 5% of the articles provided information related to case management leadership and patient healthcare outcomes.

A refinement of the search strategy was conducted with the initial search terms retained, the words “Veterans” and “Veterans Affairs” were added, and the term “outcome measure” was removed. The second search included PubMed, CINAHL, PsycINFO, and Web of Science search engines. Dates for the literature search were January 2008 to 2019 chosen based on the nearly constant organizational change in VA which impacted care coordination. The second search yielded 35 articles regarding VA case management and leadership (Appendix A). A close examination of the publications from the second search for relevance to VA case management yielded 23 articles for review and synthesis. Table 1 provides a synopsis of the literature reviewed on VA case management.

Publications from AES researchers were reviewed for relevance to VA case managers, care coordination, organizational change, and leadership. The VA AES was developed in 2001 to assess workforce satisfaction and refined in response to inquiries on VA organizational health and culture. Numerous published AES articles are archived on the National Center for Organization Development (NCOD) website and cited within the NCOD handbook (National Center for Organizational Development, 2016; Osatuke et al., 2012). These publications and

others related to case management and leadership were reviewed. A total of 33 AES publications were reviewed with 20 relevant to leadership and case management and were included in the final literature analysis. Table 2 provides a synopsis of the selected AES publications.

The procedures for this phase of the literature review follow the definition of a systematic review, which is a compilation of literature fitting pre-specified criteria to answer one or more research questions. In accordance, the technique must be reproducible, attempt to identify all literature which meets preidentified criteria, includes a critical assessment of the findings, and synthesized results of the identified studies (Moher et al., 2015). Appendix B presents a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Diagram of the literature review strategy. A review of leadership conceptual frameworks and theories also was performed and is described in the following subsection.

Leadership: Conceptual Framework

Leadership models and frameworks were reviewed to determine which approach to use to evaluate elements of leadership in the VA case management and AES literature and for use in evaluating AES responses in Phase III of the study design. The study of case managers as leaders was undertaken because of the failure of care coordination programs in VA and was supported by the Leading Change theory, indicating that case management success must include an enterprise-wide coalition with credibility and the leadership skills needed to effectively drive change (Kotter 2012).

The review of literature included leadership frameworks, theories, and principles most applicable to case managers working in the private sector and federal healthcare settings (Antonakis & Day, 2017; Callahan & Grunberg, 2019; Grunberg et al., 2018; Nohria & Khurana, 2010; Northouse, 2014). According to Antonakis and Day (2017), autonomy may be described as

shared leadership with context being a newly recognized, but important consideration. The antecedents leading to shared leadership found by Pearce et al. (2014) and most relevant to a vertical leadership organizational structure includes empowered leadership which focuses on vision, purpose, and values. This viewpoint is applicable to the VA, which has a long-standing vertical leadership structure where case managers simultaneously work as mid-level managers and are considered front-line staff (VHA Handbook, 1010.01, 2016). Whereas the shared leadership view theoretically promotes vision, purpose, and values, this style favors a hierarchical leadership structure and, according to Kotter's Change Theory (2012), would not fully establish coalitions which lead to successful organizational change.

The work of Hooker and Csikszentmihalyi (2003) proposed that shared leadership depends upon clear communication in the form of provided goals and clear feedback which describe the importance of context and matches challenges with skills. This vision of shared leadership requires an evaluation of the case manager's communication and adaptability of competence according to a given environment. The concepts of autonomy and empowerment leading to shared leadership, and the importance of communication, context, and matched competencies are further addressed by Yarnell and Grunberg (2017). In their description of adaptive or allostatic leaders, continuous change increases stress and requires the leader to adapt in response to fluctuations in tension. This is particularly relevant during times of continuous organizational change.

A focus on the theory of leadership engagement in the form of communication and purpose is described in the Leader-Follower conceptual Framework (LF2) formerly referred to as the FourCe-PITO (Barry & Grunberg, 2020; Callahan & Grunberg, 2019). Accordingly, effective, respectful, and compassionate communication in military medicine is an essential

element to inspire and influence. VA case managers are expected to apply exceptional communication skills with an understanding of the Veteran's healthcare goals. Communication which is inspirational and influential is critical to Veteran engagement and healthcare compliance and is an essential case management leadership skill (Richman, 2017). As described by leadership experts, communication, competence, and character in the context of change are essential elements of leaders and of those in leadership roles (Northouse, 2014; Yarnell & Grunberg, 2017).

The LF2 was selected as the conceptual framework used to catalogue the case management and AES literature and the AES questions in Phase II of the study design. The LF2 was chosen for its clarity and comprehensive inclusion of essential leadership elements and psychosocial domains. These elements were addressed by other models reviewed but not with the same degree of clarity and thorough description. The elements and domains included in the LF2 draw upon many models and was developed to identify, educate, and train adaptive and effective uniformed medical leaders, including physicians, nurses, and other healthcare professionals.

The LF2 includes four domains of leadership (four C's) -- character, competence, context, and communication -- and operates across four psychosocial levels (PITO) -- personal, interpersonal, team, and organizational interactions. The four C's are further described as: (1) character refers to who the leader is and all aspects of the individual, including attributes, personality, attitudes, values, charisma, and physical characteristics; (2) competence refers to what the leader knows and includes role-specific leadership knowledge, problem solving skills, decision-making, and emotional intelligence; (3) context refers to when and where leadership occurs and involves the physical, psychosocial, and cultural environments; and (4)

communication refers to how the leader interacts with followers, which includes sending and receiving verbal and nonverbal information. Many models incorporate communication into the competency category; however, this model separated communication because of its importance to effective leadership.

The four psychosocial levels (PITO) of the LF2 overlap, interact, and operate together (Jackson et al., 2010; Price, 2004; U.S. Air Force Academy, 2017). These levels of interaction were identified by the leadership training program at the US Air Force Academy (2017):

(1) personal interactions of the individual leader, including self-awareness; (2) interpersonal interactions of the leader and one other (e.g., dyads); (3) team interactions focusing on operations of small groups who unite around a shared goal or purpose; and (4) organizational interactions of large groups, institutions, and systems, such as healthcare systems.

The LF2 emphasizes the importance of followers because without followers, there cannot be leaders or teams. This relationship is particularly applicable and important to the efficiency of healthcare teams. The LF2 concepts are consistent within larger teams and include the U.S. Army, Navy, and Air Force leadership philosophies (Department of the Air Force, 2011; Department of the Army, 2012; Department of Navy, 2019). The LF2 is a strategic synthesis of several leadership models described in the scholarly leadership literature and the military leadership philosophies. The framework guides leadership training in the School of Medicine and the Graduate School of Nursing at the Uniformed Services University of the Health Sciences. Application of this framework to evaluate the responses of VA case managers provides a consistent approach for healthcare providers in the Military Health System (MHS) (see Figure 1).

Twenty-two leadership models and theories were reviewed. The leadership publications were described and categorized into themes which were later considered for assessing the case management and AES literature. Descriptions of the leadership theories, models, and philosophies reviewed are included in Table 3.

Case Management: Literature Review

Articles found in the categories for VA case management and the AES were critically reviewed according to the: (1) study design and methods, (2) overall strengths, weaknesses, or gaps in findings, (3) central theme of the article, and (4) presence or absence of leadership elements in the review. Additional information of relevance not addressed in the literature review is described in Tables 1 and 2.

The following represents the articles gathered and themes discovered for VA case management and leadership: (1) organizational change and redesign assessment; (2) clinical program assessment; (3) care coordination and case management model assessment; (4) team healthcare program assessment; (5) competency assessment; and (6) Veteran experience. An analysis of the publications on organizational change is provided along with a synthesis and critique of all literature determined to be applicable.

The eleven organizational change publications were highly relevant to the current and synthesized state of VA case management in context and theory according to a systematic literature review on this subject (Peterson et al., 2018). An assessment of change after program implementation disclosed several unanticipated challenges leading to the conclusion that intensive case management was needed for the homeless patient cohort. In contrast, case managers from the study reported frustration with the demands of metric collection, which they interpreted led to decreased care coordination (Austin et al., 2014). A follow-up publication

addressed an error in a 2013 cohort study of the homeless program, showing that case management ratio recommendations were under-reported, social workers reported fear regarding outcome measure expectations, and facility leaders were unhelpful when organizational change focused purely on outcome measures (Kertesz et al., 2015).

A randomized control study of homeless Veterans tested an implementation model using specific steps to carry out an evidenced-based practice. Case managers using the approach demonstrated an improvement in program implementation. However, case managers also reported that they did not have the necessary leadership involvement nor the training to fully understand the expectations for program implementation (Chinman et al., 2017). Authors posited that failures to adequately train staff and provide leadership support could influence sustainment in care coordination programs.

In the evaluation of organizational change, lean-six-sigma techniques were used to assess the efficiency of implementing the Veterans Choice Program (Ball et al., 2017). The findings identified clinical and process inefficiency, a lack of staff adaptability, and a decline in care coordination. An additional summary of systems-redesign described elements in a toolkit for a community healthcare worker (CHW). This publication pointed to the possibility of a role change for case managers in the outpatient setting. The profession for which the toolkit should apply was not explicit, and although the use of a CHW showed cost savings and could be relevant to the mandates of the VA 2018 MISSION Act, the summary did not apply to the professional roles and responsibilities of case managers (Brooks et al., 2015).

The literature on organizational change, overall, demonstrated a variety of study designs, appropriate methodologies, and sample sizes, with results that generalize to multiple Veteran cohorts and case management programs. There were similar findings among several

publications, but recommendations were often vague regarding instruction for program implementation. For example, the reviewed articles revealed that stepped implementation models and performance improvement assessments can support the launch of new practices and programs; however, only one article of the eleven on organizational change explicitly described successful program implementation (Chinman et al., 2017). As previously discussed, although program implementation was successful, the sustainment of the care coordination component was likely unsuccessful because of a lack of training and leadership support.

The literature describing unsuccessful program implementation reported a lack of: (1) adaptability of staff, (2) staff resources and training, (3) leadership involvement, and (4) a fear of reprisal related to unmet predetermined metrics (Ball et al., 2017; Chinman et al., 2017; Kertesz et al., 2015). Of these findings, all speak to the opportunity for case management leadership skill development as influencing future program implementation success and sustainment (Barry & Grunberg, 2020; Callahan & Grunberg, 2019; Yarnell & Grunberg, 2017).

In a publication which studied the root-cause of 48 oncology events (27% resulting in death), authors identified the need to improve care processes, interdisciplinary communication, and care coordination (Aboumrad et al., 2018). In a related article, barriers and facilitators to care coordination of stroke patients were assessed. The obstacles included a lack of care coordination, although the expansion of the RN stroke coordinator's role was found to be a facilitator to patients with transient ischemic attack (Damush et al., 2017). Aboumrad et al. (2018) and Damush et al. (2017) do not describe care coordination or the role of the care coordinator in these settings. For example, anecdotally, care coordination in a VA stroke clinic would not involve a case manager but rather an outpatient RN, who provides patient education with no other follow-up after this single episode of care and includes other vital members of the

patient's team. Damush et al. showed favorable outcomes when expanding the RN coordinator's role, however the stroke coordinator had round-the-clock support of a stroke team and offered time-limited services to Veterans. It is important to note that in VA, case management, care management and care coordination are specific terms used for different patient populations and in a variety of settings. To help clarify these terms and the various roles, descriptions are further offered below.

VA defines Care Coordination as a system-wide approach to the deliberate organization of all Veteran activities to facilitate the appropriate delivery of healthcare services (VHA Handbook 1110.04, 2013, p. 1). The provision of care coordination may occur at any setting in VA but is a time-limited episodic service. Case Management is defined as a proactive and collaborative systems approach to the oversight and management of an integrated and longitudinal care-plan for patients with complex healthcare needs (VHA Handbook 1110.04, 2013, p. 2). The provision of case management services in VA typically occurs in specialty clinic settings but also may occur in the patient's home via telehealth. The services are offered to patients with complex needs and over an extended period-of-time. In the case of severe combat injuries, case management services may be required and offered for the Veteran's lifetime.

Considering the VA case management and care coordination definitions in both the oncology and stroke cohort studies (Aboumrad et al., 2018; Damush et al., 2017), it is unclear if the Veterans had ongoing complex healthcare needs and if they would have benefited from longitudinal care-plans and follow-up by a case manager. If a case manager was necessary, then the authors' recommendations for care coordination may have been misstated or their understanding of the role(s) misunderstood.

The publication on transitions in care between Department of Defense (DoD) and VA lessens the confusion surrounding care coordination. A description is offered on the Lead Coordinator (LC) initiative and the assignment of a lead case manager as a single point of contact for each Veteran (Perla, Jackson, Hopkins, Daggett, & Van Horn, 2013). Two case studies are presented with the role of the lead coordinator described as a specifically chosen case manager with necessary knowledge of the Veteran's healthcare plan, relaying vital information between healthcare providers on behalf of the Veteran. This article was limited by the rapid developments of programs within the VA and changes within the lead coordinator program, which resulted in the expansion of the LC initiative to the Care Coordination and Integrated Case Management (CC&ICM) initiative. As described by Greenstone et al. (2019), the CC&ICM is a unique case management approach, driven by RN and SW change agent champions. According to Greenstone et al., stakeholders are expanding the CC&ICM beyond the initial 12 pilot sites to include a phased roll-out enterprise-wide in VA. The case managers described in the lead coordinator and the CC&ICM publications would be considered invested in a common goal within the LF2 (Callahan & Grunberg, 2019) and includes coalition building with respected subject matter experts, characteristics recommended by Kotter's Leading Change theory (2012).

According to Northouse (2014), author and scholar on classic and contemporary leadership approaches, the function of management is to reduce chaos through consistency, whereas leadership's primary purpose, is to bring effective change. The distinction between managing and leading is not mutually exclusive because consistency can and should be utilized when facing change. Management and leadership are demonstrated as VA case managers work toward the Veteran's goals in a consistent manner, promoting trust, and in a constantly changing environment. It is unknown, however, whether case managers value their actions as contributing

to the success of organizational change in VA. To better understand these specifics, the following section describes the VA AES literature on topics relevant to VA leadership, case management, care coordination, and organizational change.

VA All Employee Survey: Literature Review

The literature reviewed from the AES publications were evaluated and distributed according to themes as follows: (1) Organizational development and change, (2) Interpersonal staff engagement, (3) Employee satisfaction, and (4) Teamwork assessment. No AES publications were specific to case management, but topics were related in themes similar to those uncovered in the VA case management search. A review of the relevant AES articles is provided below.

Acceptable methods and appropriate sample sizes were used in most AES studies reviewed. Consistent within five of the six studies was the use of organizational change theories for analyzing adaptability and resistance of staff to change. It is unclear if study findings were contributory or specific to the organizational change affecting case management or care coordination. For example, one study described an organizational development program designed to improve civility in workgroups, termed CREW, Civility, Respect, and Engagement in the Workplace (Osatuke et al., 2013). The theme of employee engagement is noted in 25% of the publications reviewed with civility and respect influencing employee satisfaction. The reason for introducing a program on civility was reportedly in response to employee feedback from the 2005 employee survey showing a correlation between decreased job satisfaction and low scores on workplace civility metrics. Whereas the program described timely and successful outcomes when applied in motivated groups of VA participants, data specific to the use of CREW for case

management groups was not evident in the literature reviewed (U.S. Department of Veterans Affairs, 2017; Yanchus, 2015).

The AES publications related to VA case managers and care coordination included the themes of teamwork and managerial self-awareness. Findings of Benzer et al. (2011) indicated that relational climates in diabetic and primary care clinics increased the likelihood of patient compliance. These results are consistent with recommendations of a case management landmark publication and have direct application to the VA case manager-Veteran relationship (Grinberg et al., 2016). A positive relational climate is often critical to whether Veterans keep their appointments, adhere to medication regimens, and is vital to a therapeutic relationship in general. The Benzer (2011) publication supports the use of the LF2 to analyze the levels of interaction applicable for successful relational climates in VA.

Additional topics germane to case managers included the AES publications on managerial self-awareness and the impact of burn-out (Hernandez et al., 2015) and Freedman's theory on organizational change (Osatuke et al., 2014). According to the LF2, good leaders are aware of their contextual setting and the impact of their personal and interpersonal interactions (Callahan & Grunberg, 2019). The self-awareness of case managers is essential to improve Veteran satisfaction, and for the self-actualization of competent nurses and social workers. According to Freedman's theory on organizational change, the experience of change might be better managed by both seeking and offering support throughout the change process. Support through change is typically offered from leader to subordinate. According to the LF2, the leader can offer support to the follower who may become a newly empowered leader, who then supports other followers in turn, who become empowered leaders (Barry & Grunberg, 2020).

Accordingly, VA case managers fluctuate between leader and follower roles in their organization, on teams, in dyads, and on an autonomous level.

Literature Review: Discussion

As was noted throughout the case management and AES literature review, several publications pointed to problems with program implementation, but few provided solutions. While retrospective studies are helpful, the use of Implementation Science to understand the critical conditions that ensure staff engagement, program implementation, and impact of clinical practice may be a more targeted approach for future program execution processes (Sullivan et al., 2018).

In the review, several papers ($n = 5$) suggested that case managers manage as well as lead in a variety of clinical settings. The authors did not, however, clearly indicate the extent to which case managers function as leaders. The findings further revealed unsuccessful program implementation resulting from a lack of staff adaptability, a lack of necessary resources, a lack of ongoing involvement of senior leaders, and a fear of reprisal for underperformance in predetermined metrics.

Literature Review: Limitations

The use of VA jargon and acronyms, although spelled out initially, can be overused in the VA literature. The overuse of acronyms has the potential to make reading VA publications less approachable and, perhaps, less useful for providers in the private sector who may want to learn about the VA's many accomplishments and available programs. This point may become more meaningful as civilian providers, caring for Veterans through mandates of the MISSION Act, may need or want to review and understand the VA literature in their areas of practice (see Table 4, Glossary of Terms).

Literature Review: Findings

The number of Veterans seeking services in the community is expected to increase the workload for VA case managers attempting to coordinate VA services, as well as private sector resources. In 2018, the number of RNs and SWs responding to general questions on the VA employee survey was 40, 533 RNs, and 9, 922 SWs. Of the RN and SW survey respondents, it was previously unknown how many were in the role of a case manager. A demographic question was added to the AES for inclusion in the June 2019 survey: Are you a direct provider of care coordination, care management, or case management services? This added question and an analysis of survey responses identifies RNs and SWs who function in the case manager role with the potential to provide insight regarding case management leadership elements and the qualities potentially affecting care coordination in VA.

Literature Review: Importance to Veterans Affairs

The literature review of VA case management and AES literature indicates that an understanding of the elements influencing case managers and the care coordination process are urgent and critical issues for Veterans as they seek healthcare services in VA and the private sector. The current dissatisfaction of Veterans resulting in Government recommendations may, in part, be a result of the lack of the leadership skills or knowledge of VA case managers. The preceding literature review points to the leadership qualities of case managers as being unexplored and requiring further evaluation. To increase knowledge related to the unaddressed literature on case management leadership, the present, doctoral research study was designed to assess the annual VA AES and the responses of RNs, SWs, and case managers utilizing a leadership conceptual framework.

Literature Review: Significance of the Problem

Census data collected in 2016 indicate the average age of Veterans was 64 and of non-Veterans was 44 (National Center for Veterans Analysis and Statistics, 2016). People who are advance in age are more likely to experience chronic diseases such as hypertension, coronary artery disease, and diabetes (Dall, et al., 2013). Projections further indicate that by 2050 these aging population will present considerable challenges to healthcare delivery systems and policy makers (Ortman, Velkoff & Hogan, 2014). Further, shifting healthcare between overburdened programs, such as social security and Medicare, will not mitigate the growing healthcare challenges (Mehrotra, Forrest, & Lin, 2011). Research in this area does project and emphasize the importance of future healthcare management using a multidisciplinary team-based approach which includes case managers for provision of care coordination (Bertakis, Azari, 2011; Bodenheimer, Chen & Bennett, 2009; Dall, et al., 2013).

The retention of case managers through the complex and unprecedented change in VA is crucial. A first step to stabilizing care coordination is the identification, promotion, and retention of case managers with leadership skills and expertise. The identification of leadership elements of registered nurse and social work case managers is essential to promote existing leadership skills, to address leadership gaps, and to provide guidance for the rapid deployment of leadership education of case managers. It is expected that these actions would influence satisfaction and promote safe, effective healthcare outcomes for Veterans. The following chapter provides a description of the research methodology which includes: the purpose; study questions; specific aims; tools used; data description, collection, management, protection, and privacy; sampling methods; population sample; biases; ethics and human subjects considerations; estimated timeline projections; and a description of the phased-study design.

Chapter Two: Study Design

Purpose

The purpose of the research study was to provide insight into the qualities needed to improve case management performance which influences Veteran satisfaction with VA healthcare services. Utilizing a Leader-Follower conceptual Framework (LF2), the study assessed the annual VA AES questions to determine: (1) if the elements of leadership were addressed or if any meaningful gaps were identified in the survey questions, and (2) if the 2018 and 2019 AES responses of RNs, SWs, and case managers reveal the presence or absence of leadership elements.

A phased-study design was used to evaluate the AES and the LF2. Phase I assessed questions similar to those used on the annual VA AES to determine whether the LF2 could be used to reliably categorize questions. Phase II used the LF2 to assess the items within the AES and to categorize them into leadership element indices consistent with the LF2. Based on these indices, Phase III compared responses of RNs, SWs, and case managers using Independent Samples T-Test and One-way Analysis of Variance (ANOVA).

Study Design: Questions and Specific Aims

The guiding principle for the research is that case managers who function as leaders positively influence coordinated access to VA healthcare and services. Study questions for exploration included: (1) using the LF2, are elements of leadership evident in the VA AES questions; (2) for an identified dominant leadership element, is there a significant difference in the mean responses of RNs and SWs in 2018 and 2019; and (3) for an identified dominant leadership element, is there a significant difference in the mean responses of RNs, compared to SWs, compared to case managers in 2019?

To determine if leadership elements were absent or present, the specific aims: (1) described AES responses from 2018 RNs and SWs, and 2019 RNs, SWs and case managers; (2) compared AES responses between 2018 RNs and SWs; (3) compared AES responses across years within groups (RNs and SWs); and (4) compared AES responses among 2019 RNs, SWs, and case managers.

Study Design: Tools Utilized

The LF2 was selected as the tool to identify leadership elements in the AES questions and from employee responses. The framework was chosen because it incorporated leadership principles used by the United States Air Force, Army, Coast Guard, and Navy, and is a synthesis of several leadership models described in the scholarly leadership literature (Callahan & Grunberg, 2019; Grunberg et al., 2018). This framework is also a relevant tool for assessment because of its use in leadership education and development at the Uniformed Services University of the Health Sciences.

The VA AES database is considered a living document and was initially developed in 2001 to meet the needs of VA leadership to assess workforce satisfaction, organizational climate, and VA culture (Osatuke et al., 2012). AES items are developed based on reviews of the research literature, refined across multiple years of administration, and are included in the annual survey for their organizational value to the VA (Benzer et al., 2011; Moore & Nagy, 2002; Osatuke & Howe, 2014). A review of the VA AES literature indicated that roughly 45% of the publications had some alignment with leadership. However, no study was identified which analyzed RNs, SWs, or case managers from the perspective of a leadership conceptual framework. The AES data was deemed appropriate for analysis when considering: (1) the importance of the survey to

the primary mission of the VA; (2) the accessibility of the archived data; and (3) the ongoing instrument validation by VA senior researchers.

Data: Description

A review of questions from the VA AES of 2018 and 2019 categorized 50 questions consistent from both years. Two questions of Yes/No construct and two open ended questions were eliminated from the study because they lacked a contributory quality for the study purpose. The scales used by the AES included a seven-level burnout scale and five-item ordinal satisfaction and agreement scale. These scales approximate interval-level measurements for statistical analysis (Carifio & Perla, 2007). Table 5 lists the 50 AES questions and scale types used in 2018 and 2019.

Data: Collection and Management

The AES dataset was available to the Student Principal Investigator (S-PI) through May 2021 as stipulated in the VA Data User Agreement (DUA). Katherine Osatuke, Ph.D., is a Health Scientist for the VA National Center for Organizational Development (NCOD) and consultant on the AES database and relevant VA Internal Review Board (IRB) policies and procedures. During the retention period, the S-PI implemented appropriate administrative, technical, and physical safeguards to protect the confidentiality of the subjects' data to prevent unauthorized use or access. After the retention period, the S-PI will delete data files and report the date of deletion to VA NCOD and IRB, and USUHS IRB.

The AES data were uploaded utilizing IBM Statistical Package for the Social Sciences (SPSS) software (IBM SPSS Statistics, 2020) through a VA Information Technology portal (VHA Data Portal, 2018). An electronic logbook for tracking activities was maintained on the VA SharePoint. The logbook included the study title, specific aims, purpose, background, and

the protocol for data collection and analyses. A codebook for tracking the transformation of any data into numerical codes and any code changes or missing data was documented and monitored for quality assurance. The S-PI compiled all data collected from the survey. The S-PI and her dissertation committee chair reviewed the data weekly to ensure accuracy of data entry and analyses. The S-PI was responsible for the data analyses and ensured completion and dissemination of reports. The management of the data is documented in the Data Management Codebook, Appendix D.

Data: Protection and Privacy

Survey information provided as part of the study was confidential and protected to the fullest extent provided by law. Information and other records related to this study were accessible only to those persons directly involved in analyzing study data. The use of VA data was requested from VA's National Center for Organizational Development (NCOD) and approved by their committee after submission of a Data User Agreement (DUA), shown in Appendix C. Data were sent by VA National Center for Organizational Development to the S-PI via encrypted email. Data were exported and stored behind an electronic firewall on a government-furnished laptop. The laptop was kept securely in the S-PI's office desk. Data integrity was monitored at the time of entry by automated checks and periodic online data monitoring queries by the S-PI and as stipulated by VA security requirements..

Data: Population and Sample

The sample was considered homogeneous because chosen participants were in the same occupation and were employees of the VA (Gliner et al., 2009). The convenience sample were of volunteers who self-select for participation in the survey. The sample limits findings to case managers from the SW and RN professions only. These professions were representative of most case managers in VA and the private sector (Case Management Society of America, 2016).

Participants were identified as SWs and RNs and by affirming they were a direct provider of care coordination, care management, or case management services by survey response. Screening for eligibility was based on inclusion and exclusion criteria and performed by identification of profession codes (RN, SW, or case manager).

The number of RNs responding to the survey in 2018 was 40,533, and in 2019 was 41,218. The number of SWs responding to the survey in 2018 were 9,922 and in 2019 were 9,672. The number of respondents who identified as case managers in the 2019 survey was 23,540 (15,485 of the 41,218 total RNs; 8,055 of the 9,672 total SWs). Approximate response rates for all VA employees averaged 63% on the 2018 and 2019 surveys. In general, high response rates represent an increase in accuracy of population responses and decrease the likelihood of a non-response bias (Greatbrook, 2020).

Participants were identified as: (1) SWs and RNs 2018 and 2019 survey responses, (2) SWs and RNs and affirming they were a direct provider of care coordination, care management, or case management services by the 2019 survey response, and (3) through screening for eligibility based on inclusion and exclusion criteria and performed by identification of profession codes (RN, SW, case managers) in the data output.

Inclusion Criteria: (1) Participants identifying as an RN, SW, or case manager; (2) Full or part-time VA employees; (3) Any race, ethnicity, or gender.

Exclusion Criteria: (1) Participants not identifying as an RN, SW, or case manager; (2) Contract employees

Independent Variables: RNs, SWs, case managers, 2018, 2019

Dependent Variables: Dominant leadership elements; AES responses

Study Design: Potential Biases

Self-selecting to participate in a survey can potentially bias results because participants' motivation to participate can be different than non-participants and is sometimes referred to as non-response bias. If non-respondents are fundamentally different from respondents, then findings can be skewed. Confidence that sample respondents represent the population is generally observed with higher response rates which leads to a lower likelihood of non-response bias (Nohr & Liew, 2018). Response rates for the cohorts studied in 2018 and 2019 averaged 64%, decreasing the likelihood of response bias.

The use of the AES data was established by the accessibility and feasibility of the source data and by the basic requirements of the investigation. Convenience and minimal cost for accessing the data were factors contributing to the study design but were not believed to compromise the integrity of the research approach.

Ethics and Human Subjects Issues

AES datasets represent archived data where individual respondents cannot be identified. A Health Insurance Portability and Accountability Act (HIPAA) waiver of authorization was required for data involving employee surveys from the VA IRB. VA IRB approval was granted through the Washington, DC VA medical center IRB (see Appendix C, Administrative Approvals). The USU Graduate School of Nursing, Ph.D. Nursing student (study project S-PI) is credentialed as a provider at the DC medical center facility. Joel Scholten, MD, Associate Director for Physical Medicine and Rehabilitation Services at the DC VA medical center and co-sponsored the S-PI's VA IRB application and review. IRB approval through USUHS IRB was also reviewed approved through the USUHS (see Appendix C, VA and USUHS IRB administrative approval letters and addendums).

Study: Projected Timeline

A timeline for tracking project target dates and milestone dates was monitored. Table 6 provides an outline of project steps and target months for completion. The S-PI monitored for any study deviation or unanticipated problem involving risks to study data. The S-PI was responsible to report unexpected problems involving study deviations from the research protocol. The reporting of study protocol deviations was planned to occur through e-mail or phone to the USU IRB and the Washington, DC VA medical center IRB within 24 hours of discovery, with a follow-up summary submitted in writing within five business days. Due to unforeseen administrative delays related to Covid-19, an extension for the VA data user agreement was requested and granted.

Phased Design: Overview

An exploratory investigation and phased-design were used to determine interrater reliability of the LF2, and the applicability of the framework for assessing leadership elements in the AES questions. Phase I and Phase II of the study design describes the interrater and AES assessment and scoring process. Phase III describes the methods for analyzing the responses of RNs, SWs, and case managers responding to the VA AES in 2018 and 2019, according to the leadership elements identified in Phase II of the study design.

Phase I of the study design utilized the LF2 and required raters to identify leadership elements as present or absent in practice questions and clarified scoring inconsistencies through discussion. The purpose of Phase I was to practice scoring AES like-questions utilizing the LF2. Phases I and II did not require Internal Review Board (IRB) approvals. Procedures and a discussion of the results for Phase I are presented in Chapter Three.

Chapter Three: Phase I

Phase I: Practice Question Assessment

The purpose of Phase I was to assess questions similar to VA survey questions using leadership conceptual framework and by assessing the degree of agreement between expert raters of the framework. To make this determination, the S-PI created practice questions similar to those on the AES in style and structure. Procedures for Phase I practice assessment included:

1) Twenty-five practice questions were created by the S-PI and represented 39% of the total number and 100% of the total scale-type of questions asked on the VA AES. The practice question scale types imitated included: Agreement, Satisfaction, and Burnout scales. The practice survey questions were designed to be like the AES questions in construct, language, style, content, and approximate number of words.

2) An assessment was conducted by two independent raters. The independent raters were subject matter experts on the LF2 and were recruited from the Uniformed Services University of the Health Sciences (USU).

3) Raters and the S-PI first read the required leadership publication by Grunberg et al. (2018) and discussed the framework, striving for a common understanding of the composition, scope, and application of the elements. The discussion allowed for deliberation on each of the eight elements (communication, context, character, competency, personal, interpersonal, team, and organization) and considered any overlap of the elements.

4) The raters independently answered five assigned practice questions and discussed the scoring of the elements according to the LF2. Practice questions in sets of five and representing the three-scale constructs (2-agreement, 2-satisfaction, and 1-burnout) were administered until moderate agreement of raters was reached, $\geq 80\%$.

5) Once rater agreement was determined to be $\geq 80\%$, practice testing was repeated three days later, seeking moderate rater agreement, per step 4. External reliability was confirmed by repeated testing of additional questions, approximately three to five days from initial testing (Salkind, 2014). For responses that differed on the practice test, a discussion between the two raters and S-PI was conducted. The results of the practice test and subsequent discussions are in the results section below.

6) When repeated rater responses indicated a moderate strength of agreement, the raters proceeded to Phase II and followed instructions for an independent assessment of the AES questions utilizing the LF2.

7) Rater practice testing discussions were documented.

8) See Appendix E for Phase I: Practice Question Assessment Instructions

Phase I: Study Results

During Phase I the two raters independently completed the practice tests, consisting of five questions. The raters were subject matter experts (SMEs) on the leadership framework, but with no affiliation to the VA or the annual employee survey. Rater one, Dr. Neil Grunberg is the Director for Research and Development for the leadership, education, and development (LEAD) team at USU. Rater two, Ms. Erin Barry is Principal Researcher of the LEAD team with expertise on the leadership conceptual framework and assessment. Dr. Grunberg and Ms. Barry are authors and coauthors who developed and have used and assessed the framework with military medical faculty and students at USU.

The two practice tests conducted on two separate occasions resulted in scores for the tests as follows: Test 1 = 95% agreement; Test 2 = 87% agreement. See Table 7 for Practice Test One and Two interrater results. A discussion was held with the raters and the S-PI to further evaluate

question and answer discrepancies. This discussion resulted in two observations requiring further clarification: (1) what is meant by workplace? (2) when questions refer to groups or teams, when should interpersonal or team interactions be applied? This last question was relevant to employees working in groups or on teams but in remote settings such as telework. It also was noted that telework seemed to have a more contextual bearing.

Phase I: Discussion

The raters and S-PI determined that there were subtle differences in the rater's interpretation of communication in workplaces and on teams. Rater #1 was more literal in his interpretation on these questions. He focused on the self (personal) in the workplace which, in his interpretation, would not necessarily involve communicating with other team members, but would require the element of (self) competence. Rater #2 was more generalized with her interpretation of workplace and teams which, in her interpretation, would require the element of communication. A complete resolution to these few practice questions was not the intention of the discussion but was meant to broaden the perspective of all raters (including the S-PI) regarding possible interpretations of the leadership elements. Neither rater indicated that another element was present by marking "other" on the scoring sheet. In discussion, the raters explained that the questions could be clearly categorized using the LF2 and no other leadership elements emerged as being unaddressed by the framework.

Chapter Four: Phase II

Phase II: AES Interrater Assessment

Phase II utilized the LF2 to assess the leadership elements in the VA AES questions. The raters independently identified these elements, seeking inter-rater agreement of $\geq 80\%$, indicating a moderate strength of agreement (McGartland-Rubio et al., 2003). In Phase II the LF2 was applied to determine if leadership elements were present, dominant, missing, or if another element not within the leadership framework was identifiable in the AES questions. Raters were to choose one dominant leadership element from the four C's and one from the PITO categories and then identified one dominant categorical element across all eight elements (four C's and PITO). Additional instructions for the Phase II assessment included:

- 1) The raters and the S-PI reviewed the Grunberg et al. (2018) publication and notes from the practice discussions in Phase I.
- 2) The 50 AES questions were assigned to the raters by the S-PI.
- 3) Using the LF2, raters scored the AES questions according to Appendix E, Phase II: AES Interrater Assessment Instructions. Internal reliability was validated through separate rater assessments. Reliability was validated by rater scores of $\geq 80\%$. Raters and the S-PI discussed rating discrepancies for consensus in rating and for possible discontinuation of the AES questions from Phase III of the study.
- 4) Any questions with rater discrepancies were briefly reviewed with the S-PI providing a score where a tie-break was needed.
- 5) Scheduling of rater AES testing and any discussions leading to decisions regarding question scoring and interpretations were documented in the results and discussion sections.
- 6) See Appendix F for AES Independent Interrater Assessment Procedures.

Phase II: Study Results

Interrater agreement of the leadership elements in the AES questions was calculated by dividing the number of consistent rater responses (392) by the total number of possible responses (400), resulting in 98% agreement. Interrater reliability also was computed by calculating Cohen's Kappa statistic. Kappa calculations can be used as a measure of two rater agreement when binary variables are used and measures the percentage of expected agreement due to chance (Landis & Koch, 1977).

Kappa analysis was conducted by developing a 2 by 2 table. Cell probabilities represent the scores of the two raters in the categories: absent or present and for the overall dominant leadership element. Data were then uploaded to an on-line Kappa calculator (GraphPad, 2014). Kappa statistic scale interpretation indicated almost perfect interrater agreement (98-100%). The categories and the related kappa statistic results are presented in Appendix G.

As previously mentioned, the raters were unfamiliar with the AES. The S-PI, as an employee of the VA, had some familiarity with the AES. The S-PI reviewed seven questions which required a tie-break decision with justifications documented. Finalized scores are depicted in Table 8, AES Questions, and Interrater Scores. A frequency table with the dominant and overall dominant elements are depicted in Table 9, Overall Dominant Leadership Elements, and Indices.

The following section details the S-PI's rationale for the seven tie-breaker decisions. These decisions were then discussed with the raters for feedback and consensus. No further discussion or resolution to the ratings was required.

Q #14. *Disputes or conflicts are resolved fairly in my workgroup.* The determination between the basic dominant element of competency versus communication was required. The S-PI

determined that the resolution of conflicts requires communication and competency; however, communication skills are a basic requirement when in situations involving conflict, which were more likely caused by differences in opinion first, but which may remain unresolved due to a lack of skill, aptitude, or competency (Oachesu, 2016).

Q #19. *My direct supervisor raises and discusses ethical concerns (i.e., uncertainty about the right thing to do).* The determination to include the leadership element of team as present or not present was required. The S-PI determined this to be primarily an interpersonal element because of the ethical focus of the question which an individual would not be able to consider from the teams' perspective without those members included in the discussion. A team discussion of ethical concerns was not explicit. An exploration for inclusion of the teams' ethical opinions may be inferred from the question; however, the moral root of the question regarding right and wrong requires an individualized answer which could be considered with team members present but is not described in the question (National Center for Ethics in Health Care, 2018).

Q #20. *My direct supervisor communicates the reasoning (how and why) behind decisions that have an impact on my work.* The determination to include the leadership element of team as present or not present was required. This element was determined to include team by the S-PI because terminology in the question which includes impact or influence on work would include members of the team, as the term impact indicates influence of others and prompted the inclusion of team as a leadership element present in the question.

Q #28. *My talents are used well in the workplace.* The determination to include the leadership element of communication as being present or not present was required. The element of communication was determined not to be present in the question because the word talent (aptitude, skill, gift) was interpreted by the S-PI as a competency (Merriam-Webster, 2020). The

S-PI acknowledges the element of communication could be viewed as a talent for the individual who considers their own communication skills as being better than others. Although ability to communicate is a type of competency for those employees who do not see this as a talent, competency was scored as most prominent in the question.

Q #38. *My work gives me a feeling of personal accomplishment.* The determination to include the leadership element of character as being present or not present was required. Feelings of personal accomplishment often infers success. Feelings of success are associated with the character qualities of leaders (Belyh, 2016). The S-PI determined that personal accomplishment (internal success) is an element of character.

Q #46. *How satisfied are you with the information you receive from management on what's going on in your organization?* The determination to include the leadership element of context as being present or not present was required. The S-PI agreed the element of context is implied when a subordinate is given information from management regarding organizational operations. Change or implementation of new policy, procedure, or operations are often influenced by the specific environment. Of note, the S-PI would have included the interpersonal leadership element, which neither rater included. If a manager is sharing information with an employee, this can be interpreted as an interpersonal exchange, however, management could be seen as a group rather than an individual resulting in a didactic exchange.

Q #47. *I feel burned out from my work.* This question was determined to be dominant in competency versus communication by the raters. This decision was complicated because it could be argued that the employee's lack of competence as well as a stressful or erratic work environment both have the potential to impact feelings of burnout. Ultimately, the S-PI's situational experience as a VA employee led to the choice of context. Competency through

training can be obtained; however, the work environment or situation are more difficult and complicated to change. The S-PI agreed with the raters that this question was overall dominant in neither of these elements, but rather in the personal element. This determination was made based on the personal emotion, to “feel,” used in the question.

Phase II: Discussion

The S-PI and the raters discussed the rating discrepancies for Phase II to understand specific differences in scoring. The Phase II results indicated that all eight leadership elements from the framework were evident in the AES questions and no leadership elements outside of the framework (other category) were identified. The evaluation of the AES questions using the LF2 revealed that the eight leadership elements were addressed in the survey questions. There was a wide range and uneven distribution of the leadership elements across the AES questions. For example, communication and personal elements were frequently addressed in survey questions, whereas context and team elements were infrequently addressed.

AES items are developed and refined across years and are included in the annual survey for their organizational value to the VA (Benzer et al., 2011; Moore & Nagy, 2002; Osatuke & Howe, 2014). The preliminary analysis of Phase II indicates that communication and personal elements are emphasized in the AES compared with context and team elements which were not emphasized (see Table 9, Overall Dominant Leadership Elements).

These results may indicate that communication and personal elements are important to VA leadership. Given the far-reaching scope of practices in VA and leadership’s reliance on staff autonomy, responses in these domains could provide information about staff job satisfaction, attitudes, and burnout. However, given the organizational and environmental changes VA has undergone due to the MISSION Act, the lack of questions assessing teams and context is

notable. VA employees, and case managers will have increasing responsible for collaborating with outside healthcare providers as Veterans receive healthcare services in the community. Therefore, VA leadership will likely want to assess employee satisfaction, attitude, and burnout in these domains.

To interpret the Overall Dominant Leadership elements and the AES questions, Table 9 was further subdivided according to AES question types and number of leadership elements (see Table 10). Table 10 results reinforced findings from Table 9 indicating an apparent lack in questions related to leadership elements of context, competence, and team.

The methods for analyzing AES responses with the dominant leadership elements are described in Phase III, Chapter Five. The three-phase study design includes the study questions, specific aims, source, type of data utilized, and statistical analyses. Before analysis of AES responses could begin, Phase Three required grouping the overall dominant leadership elements under each AES question and according to the three AES scale types.

Chapter Five: Phase III

Phase III: Data Analyses

G*Power software was used to determine the sample sizes needed. A conservative and small effect size was used in for the Student's T-test assessment (Cohen's $d = 0.2$) and one-way ANOVA (Cohen's $d = 0.25$) as there is no empirical evidence for estimating the size of the groups to be studied. *A priori* difference between Two Independent Means was used to assess the SW and RN group means with a two tailed test to assess differences in a positive or negative direction. The error of probability of 5% ($\alpha = 0.05$) was used and indicates the risk of concluding that a difference exists when there is no difference and that a Type I error (false-positive) and rejection of the null hypothesis will occur. One degree of freedom ($df = 1$) for the two groups was used. The calculated total sample size required for the T-test study is 1302 or 651 per group.

Omnibus Fixed Effects, *A priori* Power Analysis, in the F-family were the tests used for one-way ANOVA. The error of probability of 5% ($\alpha = 0.05$) was used indicating the risk of concluding that a difference exists when there is no difference (a Type 1 error). Two degrees of freedom ($df = 2$) for the three groups of SW, RN, and case managers were the values selected to calculate the sample size. The total sample size required for the one-way ANOVA study is 969 or 323 participants for each group (UCLA Statistical Consulting Group, 2019). The power analyses imply that the number of respondents available per group greatly exceeds the minimum number required and are shown in Appendix H.

Independent Student's or Samples T-tests and one-way ANOVA assess whether means are different from one another, but do not indicate if the variation is large or small. Effect Size approximates how large any differences are when results are statistically significant ($p < 0.05$). Independent Samples T-test Effect Sizes were calculated using Cohen's $d = (Mean_2 -$

$Mean_i / Standard\ Deviation_{pooled}$). One-way ANOVA Effect Sizes were calculated using $\eta^2 (\eta^2 = Treatment\ Sum\ of\ Squares / Total\ Sum\ of\ Squares)$. Effect sizes are important to calculate and consider for large sample sizes and results which are statistically significant. Large effect sizes are associated with a greater change of the dependent variable (dominant leadership elements), which is generally attributable to the independent variable (RN, SW, case manager profession) (Fields, 2009).

The common assumptions for Independent Samples T-tests are that measurement scales are continuous or ordinal, groups of two are sampled from normal distributions, have equal variances, are from random samples, and are of adequate sample sizes. Assumptions for ANOVA are the same except groups are of three or more, and the scales of measurement are continuous, only (Crossman, 2018). Tests for these assumptions are further described in the results section for specific aims two, three, and four.

Cronbach's alpha was utilized to measure internal consistency and the reliability of closeness between the AES sets of questions and leadership elements identified as thirteen indices. Cronbach's alpha is commonly used to measure internal reliability among Likert scale questions.

Demographic variables included gender and age ranges of case managers, social workers, and registered nurses. The mean AES response of males versus females in 10-year age increments (20-30, 30-40, 40-50, 50-60, and 60-70) were assessed for differences or similarities among the cohorts and across years (2018 and 2019). Additional variables provided were the Veterans Integrated Service Network (VISN) and workgroup name. Appendix I shows the AES questions and variables.

Phase III: Data Management

Upon comparing the 50 AES questions originally provided to the actual questions asked on the 2018 and 2019 surveys, it was noted that one question (#2, *My supervisor reviews and evaluates the progress toward meeting goals and objectives of the workgroup*) was not included in the questions asked in either 2018 or 2019. In addition, one question was not previously assessed for interrater reliability (#35, *Members of my work group communicate well with each other*). A new assessment of this one question was conducted with the original raters using the exact leader-follower framework and scoring instructions as was used for rating the AES questions in Phase II. Inclusion of the new question and exclusion of the old question are shown in Tables 8 & 10. AES question #2 was previously scored with overall leadership element dominance in Competency. The new AES question #35 was scored with overall leadership dominance in Communication. In both assessments interrater agreement was 100% with no adjustment to original Kappa statistics required. A review of the original Overall Dominant Leadership Elements in Table 9 showed one less AES question in the competency category and as was noted in the Phase II results, competency element questions were infrequent and were now further reduced from three questions to two. The new question was depicted as #35 in the Communication category on the Overall Dominant Leadership Elements Table 9.

Two questions (#40 and #41) were noted to be answered using a five level Feelings scale. After discussion with the raters, the Feeling Scale questions were eliminated from the data analysis due to their low frequency. It was also noted that AES question #36 (s27) was asked of RNs in 2018 and 2019, but not of SW in 2019. Question #36 was eliminated from the data analysis due to its' exclusion from the 2019 survey questions for the SW group. A total of 49 AES Questions were assessed in 13 indices per the Overall Dominant LF2 elements and indices.

Descriptive statistics of the three cohorts (RNs, SWs, and case managers), age (in increments of 10 years), gender, and level of RNs (I – V) were evaluated from the 2018 and 2019 survey. An additional variable included the Veterans Integrated Service Network (VISN). The frequencies, means, and standard deviations of the three study groups for each year are depicted in Appendix J and described below in the results and discussion sections for Specific Aim One.

Phase III: Specific Aims

The study questions evaluated in Phase III inquired: (1) for an identified dominant LF2 element, was there a significant difference in the mean responses of RNs and SWs in 2018 and 2019, and (2) for an identified dominant LF2 element, was there a significant difference in the mean responses of RNs, compared to SWs, compared to RNs and SWs who are case managers? Formulation of these questions was based on the thesis that case managers who function as leaders positively influence coordinated access to VA healthcare and services. The specific aims and analytic methods: (1) described AES responses from 2018 RNs and SWs, and 2019 RNs, SWs and case managers, summarizing the mean and standard deviation for each group (RNs, SWs, case managers) for each year (2018 & 2019); (2) compared AES responses between 2018 RNs and SWs within the overall dominant leadership element indices using Independent Samples T-test; (3) compared 2018 and 2019 RN and SW responses (within groups) within the overall dominant leadership element indices using Independent Samples T-Test; and (4) compared 2019 RNs, SWs, and case manager AES responses within the overall dominant leadership element indices using One-way ANOVA.

Phase III: Specific Aim One Results

The purpose of specific aim one was to describe the responses of RNs, SWs, and case managers from the 2018 and 2019 VA survey. Descriptive statistics are shown in Appendix J,

Tables 1-7 and Graphs 1-5. The responses of RNs were reported at five levels according to their education, knowledge, and experience. The responses of SW were reported at one level only.

The frequency of RN responses on the VA AES in 2018 and 2019 was reported to be 40,533 and 44,575. The number of RNs employed by VA in 2018 and 2019 was reported to be 70,288 and 71,286 resulting in survey response rates of 58% and 63% for RNs during these years. The frequency of SW responses on the AES in 2018 and 2019 was reported to be 9,922 and 10,902. The number of SWs employed by VA in 2018 and 2019 was 15,226 and 15,533 resulting in survey response rates of 65% and 70% for SWs during these years (US Department of Veterans Affairs, 2018 & 2019).

Data for the AES 2019 case management responses showed 61% of all RNs did not and 39% of RNs did provide case management, care coordination, or care management services. The SW responses showed 16% did not and 82% did provide case management, care coordination, or care management services. Of the 52,136 RN and SW cumulative responses, 46.3% affirmed providing case management services. The total number of case managers employed in VA in 2019 (or any year) could not be provided by AES or VA administrators for calculation of case management response rates.

Demographic results also indicated 19% male and 80% female combined RN and SW responses. Age of the respondents were reported in 10-year increments with mean age of 42, median of 40, and mode of 50. Responses of RNs, SWs, and case managers from 2018 and 2019 spanned the 50 Continental United States and represented the 19 Veterans Integrated Service Networks ($n = 105,932$).

Phase III: Specific Aim One Discussion

Responses in Appendix J show consistent frequency rates between RNs. Registered Nurses, Level II, represented the highest frequency rates (46.6; 47.1) for both years. Level II registered nurses are educated with a Bachelor of Science in Nursing (BSN), have basic clinical and management skills, and are required to have a BSN to act in managerial positions (Veterans Affairs, Office of Nursing Service, 2020).

Frequency responses for 2019 indicated case management was provided by social workers 82% of the time, compared to RNs at 39%. These findings differ from private sector reports which indicate 82% of RNs and 12% of SWs provide case management services (Tahan, Kurland, & Baker, 2020). Authors also report the highest frequency age-range of private sector case managers to be slightly higher than VA (56-65), although both the VA and private sector data on age correspond to the general projections regarding the aging U.S. population (Ortman, Velkoff & Hogan, 2014).

According to Tahan, et al. (2020) 4.3% of private sector case managers are men (women 94.7%). According to AES data, 19.3% of VA case managers were men. While both sets of data indicate most case managers are women (95%; 81%), the VA data shows a greater percentage of men case managers than the private sector. This is a noteworthy finding since a larger percent of patients (87.7) in VA are men (National Center for Veterans Analysis and Statistics, 2020).

Phase III: Specific Aim Two Normality and Reliability Testing

Assumptions for normality of the Independent Samples T-test and One-Way ANOVA statistics were evaluated. According to the description of the AES, it was assumed the sample represented an independently random sample from the VA RN, SW, and case manager employee population. Dependent variables included the VA AES indexed responses within scale types

(Likert scales of satisfaction, agreement, and burnout). The overall dominant LF2 elements and AES responses within scale type were compared within groups (RNs, SWs, case managers) between and across years (2018 and 2019).

The Kolmogorov-Smirnov (KS) test indicated that the dependent variables deviated from a normal distribution however, for sample sizes larger than 300, the KS is less reliable than tests of skewness and kurtosis (Laerd Statistics, 2018). Skewness and Kurtosis test of normality for smaller samples (< 50) use the acceptable range of normality of -1.96 and +1.96 with z values calculated by dividing the skewness and kurtosis statistic by their standard error. For samples of 50 to 300 a more liberal z range is used, -3.29 and +3.29. For this sample of > 300 the absolute skewness value of -2 and +2 and the absolute kurtosis value of -7 and +7 was used. As applied to this sample ($n = 105,932$) the sample was approximately normally distributed across the AES responses and indices.

Cronbach's Alpha was calculated to evaluate the internal reliability of the scales within indexed questions according to the LF2 elements previously established by the raters in Phase II of the study design. Generally, the higher the score the more reliable the scale being assessed. According to Nunnally (1978), a Cronbach's alpha of .70 is an acceptable reliability coefficient with lower thresholds often used in research literature. It should be noted that reliability can be influenced by the sample size, likeness of questions, and by the number of items used to formulate group indices (Salkind, 2015). Calculations for ten of thirteen LF2 elements were conducted 60% scoring as *very reliable* and 40% as *reliable*. Three of the thirteen indices did not require Cronbach's Alpha calculation due to the elimination of questions 36, 40 and 41, resulting in a reduction to one question for indices 4, 11, and 13 (Cronbach's Alpha results are illustrated in Appendix J).

Independent Samples T-test were conducted to compare survey responses of RNs and SWs from 2018 and 2019. Homogeneity of variances were assessed using Levene's test with a test value of $p > .001$ indicating equal variances assumed, and $p < .001$ indicating equal variances not assumed and corresponding T-test equality of means values reported (Appendix J and K).

Normal probability plots showed that datasets approximated normal distribution, and are generally, a better estimate of goodness of fit than histograms for large sample sizes (Thode, 2002). Choosing a statistical analysis in which the power and test is dependent on the sample size can result in overpowering. A change to nonparametric tests, such as Mann-Whitney U, does not necessarily address this issue. Therefore, in addition to considering whether the results were statistically significant the observed effect size was assessed using Cohen's d and η^2 calculations (Gert van den Berg, 2020). Appendix J, K, and L show the results of Cronbach's alpha, Levene's Test, Independent Samples T-tests, ANOVA tables, Cohen's d and η^2 effect size calculations and Survey Response Graphs.

Phase III: Specific Aim Two Results

Specific aim two compared mean responses of RNs and SWs within LF2 indices for the years 2018 and 2019. AES 2018 Index One, Character (a) leadership element response mean scores for RNs ($M = 3.47$, $SD = 1.22$) were greater than SW mean scores ($M = 3.43$, $SD = 1.20$); $t(47711) = 2.49$, $p = .013$; Cohen's $d = .029$. AES Index Two, Character (s) leadership element response mean scores for RNs ($M = 3.66$, $SD = 1.06$) were greater than SW mean scores ($M = 3.57$, $SD = 1.08$); $t(14444) = 7.55$, $p < .001$; Cohen's $d = .087$.

AES 2018 Index Three, Competency (a) leadership element mean response scores for RNs ($M = 3.76$, $SD = .958$) were greater than SW mean scores ($M = 3.71$, $SD = .976$); $t(13567) = 4.39$, $p < .001$; Cohen's $d = .052$.

AES 2018 Index Four, Context (a) leadership element mean response scores for RNs ($M = 4.10$, $SD = 1.16$) were greater than SW mean scores ($M = 4.05$, $SD = 1.18$); $t(49555) = 3.98$, $p < .001$; Cohen's $d = .045$.

AES 2018 Index Five, Communication (a) leadership element response scores for RNs ($M = 3.85$, $SD = 1.00$) were greater than SW mean scores ($M = 3.80$, $SD = 1.01$); $t(45909) = 4.63$, $p < .001$; Cohen's $d = .054$. AES 2018 Index Six, Communication (s) leadership element mean response scores for RNs ($M = 3.60$, $SD = 1.17$) were greater than SW mean scores ($M = 3.53$, $SD = 1.17$); $t(49467) = 4.96$, $p < .001$; Cohen's $d = .055$.

AES 2018 Index Seven, Personal (a) leadership element mean response scores for RNs ($M = 3.97$, $SD = .756$) were greater than SW mean scores ($M = 3.92$, $SD = .775$); $t(45631) = 5.55$, $p < .001$; Cohen's $d = .066$. AES 2018 Index Eight, Personal (s) leadership element mean response scores for RNs ($M = 3.78$, $SD = .928$) were greater than SW mean scores ($M = 3.73$, $SD = .963$); $t(14176) = 4.51$, $p < .001$. Cohen's $d = .053$. AES 2018 Index Nine, Personal (b) leadership element mean response scores for RNs ($M = 2.44$, $SD = 1.22$) were less than SW mean scores ($M = 2.50$, $SD = 1.25$); $t(14196) = -4.23$, $p < .001$; Cohen's $d = -.049$.

AES 2018 Index Ten, Interpersonal (a) leadership element mean response scores for RNs ($M = 3.96$, $SD = .992$) were greater than SW mean scores ($M = 3.90$, $SD = 1.02$); $t(13232) = 5.26$, $p < .001$; Cohen's $d = .063$.

AES 2018 Index Eleven, Team (a) leadership element response scores for RNs ($M = 3.73$, $SD = 1.10$) were greater than SW mean scores ($M = 3.67$, $SD = 1.12$); $t(14353) = 5.04$, $p < .001$; Cohen's $d = .058$.

AES 2018 Index Twelve, Organization (a) leadership element response scores for RNs ($M = 3.79$, $SD = .931$) were greater than SW mean scores ($M = 3.71$, $SD = .950$); $t(12945) = 6.43$, $p < .001$; Cohen's $d = .078$. AES 2018 Index Thirteen, Organization (s) leadership element response scores for RNs ($M = 3.70$, $SD = 1.13$) were greater than SW mean scores ($M = 3.64$, $SD = 1.15$); $t(14592) = 4.37$, $p < .001$; Cohen's $d = .05$.

AES 2019 Index One, Character (a) leadership element response for RNs ($M = 3.52$, $SD = 1.22$) were greater than SW mean scores ($M = 3.48$, $SD = 1.20$); $t(15553) = 2.51$, $p = .012$; Cohen's $d = .027$. AES 2019 Index Two, Character (s) leadership element response for RNs ($M = 3.71$, $SD = 1.06$) were greater than SW mean scores ($M = 3.62$, $SD = 1.08$); $t(15098) = 7.36$, $p < .001$; Cohen's $d = .081$.

AES 2019 Index Three, Competency (a) leadership element response scores for RNs ($M = 3.72$, $SD = .968$) were greater than SW mean scores ($M = 3.65$, $SD = .983$); $t(50880) = 6.38$, $p < .001$; Cohen's $d = .071$.

AES 2019 Index Four, Context (a) leadership element response scores for RNs ($M = 4.07$, $SD = 1.16$) were greater than SW mean scores ($M = 3.96$, $SD = 1.20$); $t(15954) = 8.43$, $p < .001$; Cohen's $d = .093$.

AES 2019 Index Five, Communication (a) leadership element response for RNs ($M = 3.81$, $SD = 1.00$) were greater than SW mean scores ($M = 3.73$, $SD = 1.02$); $t(15069) = 6.68$, $p < .001$; Cohen's $d = .076$. AES 2019 Index Six, Communication (s) leadership element response

scores for RNs ($M = 3.47$, $SD = 1.20$) were greater than SW mean scores ($M = 3.39$, $SD = 1.21$); $t(54488) = 5.76$, $p < .001$; Cohen's $d = .063$.

AES 2019 Index Seven, Personal (a) leadership element response scores for RNs ($M = 3.94$, $SD = .753$) were greater than SW mean scores ($M = 3.87$, $SD = .766$); $t(51081) = 7.68$, $p < .001$; Cohen's $d = .085$. AES 2019 Index Eight, Personal (s) leadership element response scores for RNs ($M = 3.73$, $SD = .935$) were greater than SW mean scores ($M = 3.66$, $SD = .960$); $t(15809) = 6.47$, $p < .001$; Cohen's $d = .072$. AES 2019 Index Nine, Personal (b) leadership element response scores for RNs ($M = 2.46$, $SD = 1.22$) were less than SW mean scores ($M = 2.54$, $SD = 1.26$); $t(15620) = -.627$, $p < .001$; Cohen's $d = -.070$.

AES 2019 Index Ten, Interpersonal (a) leadership element response scores for RNs ($M = 3.92$, $SD = 1.00$) were greater than SW mean scores ($M = 3.84$, $SD = 1.02$); $t(14946) = 7.35$, $p < .001$; Cohen's $d = .085$.

AES 2019 Index Eleven, Team (a) leadership element response scores for RNs ($M = 3.69$, $SD = 1.11$) were greater than SW mean scores ($M = 3.62$, $SD = 1.13$); $t(15841) = 5.72$, $p < .001$; Cohen's $d = .063$.

AES 2019 Index Twelve, Organization (a) leadership element response scores for RNs ($M = 3.74$, $SD = .936$) were greater than SW mean scores ($M = 3.66$, $SD = .947$); $t(49589) = 7.57$, $p < .001$; Cohen's $d = .086$. AES 2019 Index Thirteen, Organization (s) leadership element response scores for RNs ($M = 3.63$, $SD = 1.14$) were greater than SW mean scores ($M = 3.56$, $SD = 1.15$); $t(16153) = 5.83$, $p < .001$; Cohen's $d = .063$.

Phase III: Specific Aim Two Discussion

All AES mean scores from 2018 and 2019 for RNs were higher than SW mean scores on all leadership element indices except nine. Index nine, Personal (b) leadership element, was

reverse scored on a burnout scale indicating a lower burnout response for RNs compared to SWs. AES indexed responses for RNs and SWs were not due to chance and were statistically significant across all measures. Effect sizes using Cohen's *d* were found to be "very small" for both years across all indices (Sawilowsky, 2009, p. 599).

Index one and two increased while all other mean responses decreased and consisted of four questions corresponding to the LF2 leadership element of character. Questions were directed to determine the degree of satisfaction and agreement concerning mutual honesty, integrity, and respect between supervisors and employees. Improvements in character indicate an improvement in emotional states of RNs and SWs. Conversely, other LF2 elements and corresponding questions indicate a deterioration in VA operations and ensuing behaviors such as communication, context, and competency. An explanation for this deterioration might be related to negative media coverage of VA in 2014, 2015, and 2016. Subsequent Office of Inspectors' General investigations and reports resulted in the provision of Veteran healthcare to the private sector and increasing workloads for case managers (Oppel & Shear, 2014; VA Office of Inspector General, 2014; MISSION Act, H.R. 5674, 104, §1703B, 2018; Greenstone et al., 2019). To better understand the difference between nurses and social workers across all measures, the variables of training, career experience, and monetary compensation were more closely examined and are discussed below.

Nursing theories are fundamental to the education and practice of nursing and parallel most of the elements. According to a nursing metaparadigm, nurses are trained to care for the individual within an environment influenced by the patient's health and the essential relationship established between the nurse and the patient (Fawcett, 1984). A few such noted theorists include Peplau, 1952, Abdellah, 1960, King, 1970, and Watson, 1979, (Wayne, 2020). Additionally,

nursing is a broadly respected and trusted profession. According to Gallop, nurses have ranked as the #1 most ethical and honest professions 19 years running (Gaines, 2021). Research also indicates selflessness and altruism as one of the strongest motivators for choosing nursing as a career furthering public trust and high job satisfaction rates among nurses (Rhodes, et. al., 2011). The Bureau of Labor indicates that nursing is one of nine most prestigious and best compensated professions in the United States (U.S. Bureau of Labor Statistics, 2020). According to the U.S. Bureau of Labor, the median annual wage for RNs was \$73,300 (U.S. Bureau of Labor Statistics, 2019).

In comparison, there are several professional theories that guide the practice of social workers, a few examples include: Systems, Social Learning, Psychosocial Development, Psychodynamic, and Rational Choice Theories. In addition to theoretical choices, there are various practice models which a SW may choose to help the client meet their goals, for example: Cognitive Behavioral and Narrative Therapy, and the Problem-Solving Model. Generally, SWs apply multiple theories and models in their role and focus on client motivation and development of autonomy within a given environment. SW training currently includes practical as well as didactic training, though the literature indicates a lack of practical ethics training and a lack of cohesion in theoretical application (Barbour, 1984; Reamer, 2002; Gentle-Genitty, et.al., 2014). In addition to the training and practical complexities, SWs are paid less than RNs. According to the 2019 U.S. Bureau of Labor Statistics report, the median annual wage for SWs was \$50,470, approximately 30% less than RN wages (U.S. Bureau of Labor Statistics, 2019). The civilian wages of RNs and SWs parallel annual average wages for VA RNs and SWs with equivalent levels of education and years of experience.

The surplus of models and theories and the lack of practical training can lead to a lack of focus in clinical practice and could partially explain the general sense of dissatisfaction for social workers in VA. In addition, the difference in monetary compensation for comparable roles of RNs and SWs functioning as case managers may be construed as unfair treatment. These discrepancies in monetary and professional value for comparable roles may contribute to how SWs are viewed and how they view themselves and may partially explain the decreased satisfaction and greater burnout responses consistently reported across all measures for SWs on the 2018 and 2019 VA AES.

Phase III: Specific Aim Three Results

Specific Aim three compared RN responses with RNs and SW responses with SWs across years (2018 and 2019) within LF2 indices. Statistical analyses included Independent Samples T-test and Cohen's d effect size.

AES Index One, Character (a) leadership element mean response scores for 2018 RNs ($M = 3.47, SD = 1.22$) were less than 2019 RN mean scores ($M = 3.52, SD = 1.22$); $t(80,576) = -5.62, p < .001$; Cohen's $d = -.040$. AES Index Two, Character (s) leadership element mean response scores for 2018 RNs ($M = 3.66, SD = 1.06$) were less than 2019 RN mean scores ($M = 3.71, SD = 1.06$); $t(82,886) = -5.75, p < .001$; Cohen's $d = -.040$.

AES Index Three, Competency (a) leadership element mean response scores for 2018 RNs ($M = 3.76, SD = .958$) were greater than 2019 RN mean scores ($M = 3.72, SD = .968$); $t(77,196) = 6.76, p < .001$; Cohen's $d = .048$.

AES Index Four, Context (a) leadership element mean response scores for 2018 RNs ($M = 4.10, SD = 1.16$) were greater than 2019 RN mean scores ($M = 4.07, SD = 1.16$); $t(83,705) = 3.75, p < .001$; Cohen's $d = .026$.

AES Index Five, Communication (a) leadership element mean response scores for 2018 RNs ($M = 3.85$, $SD = 1.00$) were greater than 2019 RN mean scores ($M = 3.81$, $SD = 1.00$); $t(77,269) = 6.24$, $p < .001$; Cohen's $d = .045$. AES Index Six, Communication (s) leadership element mean response scores for 2018 RNs ($M = 3.60$, $SD = 1.17$) were greater than 2019 RN mean scores ($M = 3.47$, $SD = 1.20$); $t(83,174) = 16.06$, $p < .001$; Cohen's $d = .111$.

AES Index Seven, Personal (a) leadership element mean response scores for 2018 RNs ($M = 3.97$, $SD = .756$) were greater than 2019 RN mean scores ($M = 3.94$, $SD = .753$); $t(77,784) = 5.17$, $p < .001$; Cohen's $d = .037$.

AES Index Eight, Personal (s) leadership element mean response scores for 2018 RNs ($M = 3.78$, $SD = .928$) were greater than 2019 RN mean scores ($M = 3.73$, $SD = .935$); $t(82,425) = 7.88$, $p < .001$; Cohen's $d = .055$.

AES Index Nine, Personal (b) leadership element mean response scores for 2018 RNs ($M = 2.44$, $SD = .992$) were less than 2019 RN mean scores ($M = 2.46$, $SD = 1.22$); $t(82,092) = -2.35$, $p < .001$; Cohen's $d = -.016$.

AES Index Ten, Interpersonal (a) leadership element mean response scores for 2018 RNs ($M = 3.96$, $SD = 1.22$) were greater than 2019 RN mean scores ($M = 3.92$, $SD = 1.00$); $t(76,351) = 5.87$, $p < .001$; Cohen's $d = .042$.

AES Index Eleven, Team (a) leadership element mean response scores for 2018 RNs ($M = 3.73$, $SD = 1.10$) were greater than 2019 RN mean scores ($M = 3.69$, $SD = 1.11$); $t(81,222) = 5.87$, $p < .001$; Cohen's $d = .041$.

AES Index Twelve, Organization (a) leadership element mean response scores for 2018 RNs ($M = 3.79$, $SD = .931$) were greater than 2019 RN mean scores ($M = 3.74$, $SD = .936$); $t(75,835) = 6.94$, $p < .001$; Cohen's $d = .050$. AES Index Thirteen, Organization (s) leadership

element mean response scores for 2018 RNs ($M = 3.70$, $SD = 1.13$) were greater than 2019 RN mean scores ($M = 3.63$, $SD = 1.14$); $t(82,715) = 8.52$, $p < .001$; Cohen's $d = .059$.

AES Index One, Character (a) leadership element mean response scores for 2018 SWs ($M = 3.43$, $SD = 1.20$) were less than 2019 SW mean scores ($M = 3.48$, $SD = 1.20$); $t(19,349) = -2.908$, $p = .004$; Cohen's $d = -.041$. AES Index Two, Character (s) leadership element mean response scores for 2018 SWs ($M = 3.57$, $SD = 1.08$) were less than 2019 SW mean scores ($M = 3.62$, $SD = 1.08$); $t(20,142) = -3.205$, $p < .001$; Cohen's $d = -.046$.

AES Index Three, Competency (a) leadership element mean response scores for 2018 SWs ($M = 3.71$, $SD = .98$) were greater than 2019 SW mean scores ($M = 3.65$, $SD = .98$); $t(19,022) = 4.616$, $p < .001$; Cohen's $d = .068$.

AES Index Four, Context (a) leadership element mean response scores for 2018 SWs ($M = 4.05$, $SD = 1.18$) were greater than 2019 SW mean scores ($M = 3.96$, $SD = 1.20$); $t(20,422) = 5.18$, $p < .001$; Cohen's $d = .074$.

AES Index Five, Communication (a) leadership element mean response scores for 2018 SWs ($M = 3.80$, $SD = 1.01$) were greater than 2019 SW mean scores ($M = 3.73$, $SD = 1.02$); $t(18,971) = 4.475$, $p < .001$; Cohen's $d = .066$. AES Index Six, Communication (s) leadership element mean response scores for 2018 SWs ($M = 3.53$, $SD = 1.17$) were greater than 2019 SW mean scores ($M = 3.39$, $SD = 1.21$); $t(20,287.448) = 8.416$, $p < .001$; Cohen's $d = .118$.

AES Index Seven, Personal (a) leadership element mean response scores for 2018 SWs ($M = 3.92$, $SD = .77$) were greater than 2019 SW mean scores ($M = 3.87$, $SD = .77$); $t(18,928) = 3.828$, $p < .001$; Cohen's $d = .057$.

AES Index Eight, Personal (s) leadership element mean response scores for 2018 SWs ($M = 3.73$, $SD = .96$) were greater than 2019 SW mean scores ($M = 3.66$, $SD = .96$); $t(20,106) = 5.087$, $p < .001$; Cohen's $d = .074$.

AES Index Nine, Personal (b) leadership element mean response scores for 2018 SWs ($M = 2.50$, $SD = 1.25$) were less than 2019 SW mean scores ($M = 2.54$, $SD = 1.26$); $t(19,944) = -2.544$, $p < .001$; Cohen's $d = -.037$.

AES Index Ten, Interpersonal (a) leadership element mean response scores for 2018 SWs ($M = 3.90$, $SD = 1.02$) were greater than 2019 SW mean scores ($M = 3.85$, $SD = 1.02$); $t(18,785) = 4.214$, $p < .001$; Cohen's $d = .063$.

AES Index Eleven, Team (a) leadership element mean response scores for 2018 SWs ($M = 3.67$, $SD = 1.12$) were greater than 2019 SW mean scores ($M = 3.62$, $SD = 1.13$); $t(20,029) = 3.190$, $p < .001$; Cohen's $d = .046$.

AES Index Twelve, Organization (a) leadership element mean response scores for 2018 SWs ($M = 3.71$, $SD = .95$) were greater than 2019 SW mean scores ($M = 3.66$, $SD = .95$); $t(18,343) = 3.902$, $p < .001$; Cohen's $d = .058$. AES Index Thirteen, Organization (s) leadership element mean response scores for 2018 SWs ($M = 3.64$, $SD = 1.15$) were greater than 2019 SW mean scores ($M = 3.56$, $SD = 1.15$); $t(20,339) = 5.111$, $p < .001$; Cohen's $d = .072$. Appendix J shows the Independent Samples T-Tests and measures of effect for the RN and SW groups across time.

Phase III: Specific Aim Three Discussion

Specific aim three compared the responses of RNs to RNs and SWs to SWs across time (2018, 2019) by Independent Samples T-Test. For both groups mean responses to Indices three through thirteen showed a decrease in satisfaction and agreement from 2018 to 2019. Index nine

indicated an increase in mean scores, however this scale was reverse coded and therefore represents an increase in RN and SW burnout. RN and SW responses to Index one and two showed an increase in mean satisfaction and agreement responses in the leadership element of Character within groups and across years. AES 2018 and 2019 responses for RNs and SWs were not due to chance and were statistically significant. Effect sizes using Cohen's *d* were found to be "very small" for all indices across years (Sawilowsky, 2009, p. 599).

Response scores for specific aim three support the discussion and opinions offered in specific aim two as scores were consistently different across professions, measures, and years. However, RN and SW responses to Indices one and two showed an increase in mean satisfaction and agreement responses in the leadership element of character within groups and across years, warranting a closer examination of these AES questions.

The questions for the character leadership element of Index one, assessed respect for and the integrity of VA senior leaders. The questions for the character element of Index two, assessed the employee's involvement in decisions and overall job satisfaction. Positive responses for both indices indicate improved opinions and qualities of mutual respect between employees and senior leaders within the VA organization. These findings come just a few years after significant findings of secret VA waitlists and negative patient outcomes which made national news (Oppel & Shear, 2014; VA Office of Inspector General, 2014). In response, Congress passed the Veterans Access, Choice, and Accountability Act (VACAA, H.R. 3230, 2006), and the Maintaining Internal Systems and Strengthening Integrated Outside Networks Act (VA MISSION Act, H.R. 5674, 104, §1703B).

Following these reports and legislative changes VA fired four senior executives accused of falsifying records (Lunney, 2015). Training and accountability changes occurred in VA as it

strived to match the mission of caring for those “who have borne the battle” (Lincoln, 1865). Since 2016 the VA mission focused more closely on caring and required annual training on the values within *I-CARE*; Integrity, Commitment, Advocacy, Respect, and Excellence. The I-CARE values further described expectations: to care for those patients who have served, to care for fellow employees, to choose the harder right, and to perform duties to the best of one’s ability (U.S. Department of Veterans Affairs, 2017).

These values parallel the positive traits of the leadership element of character and are reflected in the positive AES responses of RNs and SWs. It could be argued that the VA’s focus on character traits (honesty, respect, loyalty, courage) resulted in decreased attention to other leadership qualities such communication, competence, and work on teams within the VA environment (context) and could explain the RN and SW decreased response scores on all other indices.

Phase III: Specific Aim Four Results

A One-way ANOVA was conducted to evaluate any differences among AES Indexed mean responses of 4 groups: RN not case managers (CMs), RN CMs, SW not CMs, and SW CMs. Levene’s test violated the assumption of homogeneity of variances for Indices 1, 4, 5, 8, 9, 11, and 13, however, sample sizes were large and unequal. Therefore, Welch’s test was run and a conservative alpha of .01 was applied for the one-way ANOVA (Moder, 2010; Miller & Ulrich, 2019). The Welch test showed a statistically significant difference among the groups for all measures and Games-Howell *post hoc* tests were used to determine where the differences in means occurred between the groups. The null hypothesis (H_0) for the ANOVA was that mean responses among the four groups were equal. The alternative hypothesis (H_a) for the analysis was

that mean response among the four groups were not equal. Results for Levene's test, Welch test, the one-way ANOVA, Games-Howell *post hoc* tests, and Eta-squared are shown in Appendix M.

Results for AES 2019 Index One ANOVA showed a statistically significant difference among the four groups, [$F(3, 47972) = 6.76, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW CM ($p = .001$). There was no statistically significant difference between RN not CM and SW not CM ($p = .748$), between RN not CM and RN CM ($p = .024$), between RN CM and SW not CM ($p = .156$), between RN CM and SW CM ($p = .508$), or between SW CM and SW not CM ($p = .035$).

Results for AES 2019 Index Two ANOVA showed a statistically significant difference among the four groups, [$F(3, 48834) = 16.69, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW CM ($p < .001$), between RN not CM > SW not CM ($p = .003$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN CM and SW not CM ($p = .012$), between RN CM and RN not CM ($p = .759$), or between SW CM and SW not CM ($p = .984$).

Results for AES 2019 Index Three ANOVA showed a statistically significant difference among the four groups, [$F(3, 46156) = 12.54, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW CM ($p < .001$), between RN not CM > SW not CM ($p = .004$), between RN CM > SW CM ($p < .001$), and between RN CM > SW not CM ($p = .001$). There was no statistically significant difference between RN CM and RN not CM ($p = .997$), or between SW CM and SW not CM ($p = .827$).

Results for AES 2019 Index Four ANOVA showed a statistically significant difference among the four groups, [$F(3, 49499) = 21.29, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN CM > SW not CM ($p < .001$), between

RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p < .001$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .558$), or between SW not CM and SW CM ($p = .684$).

Results for AES 2019 Index Five ANOVA showed a statistically significant difference among the four groups, [$F(3, 46331) = 15.45, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW not CM ($p < .001$), between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p < .001$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = 1.00$), or SW not CM and SW CM ($p = .208$).

Results for AES 2019 Index Six ANOVA showed a statistically significant difference among the four groups, [$F(3, 49428) = 9.75, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p = .007$), between RN not CM > SW not CM ($p = .006$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = 1.00$), or between SW not CM and SW CM ($p = .709$).

Results for AES 2019 Index Seven ANOVA showed a statistically significant difference among the four groups, [$F(3, 46319) = 17.67, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW not CM ($p < .001$), between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p < .001$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .974$), or between SW not CM and SW CM ($p = .446$).

Results for AES 2019 Index Eight ANOVA showed a statistically significant among the four groups, [$F(3, 48830) = 14.32, p < .001$]. Games-Howell *post hoc* testing revealed

statistically significant differences between RN not CM > SW not CM ($p = .002$), between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p = .002$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .996$), or between SW not CM and SW CM ($p = .815$).

Results for AES 2019 Index Nine ANOVA showed a statistically significant difference among the four groups, [$F(3, 48612) = 15.07, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM < SW not CM ($p < .001$), between RN not CM < SW CM ($p < .001$), between RN CM < SW not CM ($p < .001$), and between RN CM < SW CM ($p < .001$), indicating less burnout in the RN groups. There was no statistically significant difference between RN not CM and RN CM ($p = .859$), or between SW not CM and SW CM ($p = .343$).

Results for AES 2019 Index Ten ANOVA showed a statistically significant difference among the four groups, [$F(3, 45781) = 19.12, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW not CM ($p < .001$), between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p < .001$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .628$), or between SW not CM and SW CM ($p = .150$).

Results for AES 2019 Index Eleven ANOVA showed a statistically significant difference among the four groups, [$F(3, 48500) = 12.96, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p = .006$), between RN not CM > SW not CM ($p = .010$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .948$), or between SW not CM and SW CM ($p = .747$).

Results for AES 2019 Index Twelve ANOVA showed a statistically significant difference among the four groups, [$F(3, 44976) = 18.44, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW not CM ($p < .001$), between RN not CM > SW CM ($p < .001$), between RN CM > SW not CM ($p < .001$), and between RN CM > SW CM ($p < .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .961$), or between SW not CM and SW CM ($p = .423$).

Results for AES 2019 Index Thirteen ANOVA showed a statistically significant difference among the four groups, [$F(3, 49373) = 12.68, p < .001$]. Games-Howell *post hoc* testing revealed statistically significant differences between RN not CM > SW not CM ($p < .001$), between RN not CM > SW CM ($p = .001$), between RN CM > SW not CM ($p < .001$), and between RN CM > SW CM ($p = .001$). There was no statistically significant difference between RN not CM and RN CM ($p = .990$), or between SW not CM and SW CM ($p = .116$).

Phase III: Specific Aim Four Discussion

Findings from the one-way ANOVA were consistent for Indices two through thirteen which indicated there was statistically significant differences in four of six analyses ($p < .001$) between the following groups: RN not CM and SW not CM, RN not CM and SW CM, RN CM and SW CM, and RN CM and SW not CM. Findings were consistent for Indices three through thirteen which indicated no statistically significant difference between two groups: RN not CM and RN CM, and SW not CM and SW CM. The null hypothesis (H_0) was that the mean responses among the groups (RN CM; SW CM; RN not CM; SW not CM) were equal. The mean responses of the four groups studied were not equal, and therefore, the H_0 was rejected.

As with the Independent Samples T-test findings for Specific Aims two and three, Indices one and two showed no statistically significant differences between groups for Index one other

than RN not CM mean responses being greater than SW CM. Also consistent with findings from Aims two and three, the one-way ANOVA showed significant differences between the satisfaction and burnout of RNs and SWs and consistency in responses among all groups for Indices one and two, and the leadership element of character. The reasons for these changes were opined in the discussion sections of specific aims two and three. In addition to those discussion points and opinions, the one-way ANOVA showed there was no statistically significant differences in the 13 Indices between RNs and SWs whether in case manager roles or not indicating the responses of RNs and SWs were not different when in the case manager role or providing case management services.

Chapter Six: General Discussion

Purpose

The purpose of the research study was to provide insight into the leadership qualities needed and possibly missing in RNs, SWs, and case managers and which influence Veteran satisfaction with VA healthcare services. To determine if elements of leadership were addressed or if any meaningful gaps were identified in survey questions, a Leader-Follower conceptual Framework was utilized to assess the annual VA AES. A three-phased study design was used to determine interrater reliability of the LF2 and the applicability of the framework for assessing leadership elements in the AES questions. The employee responses were assessed among and between the groups (RNs, SWs, case managers) across and between years (2018, 2019).

Methods

A three-phase study design was used to evaluate the AES and the LF2. Phase I assessed questions like those used on the annual VA AES to determine whether the LF2 could be used to reliably categorize questions using LF2 subject matter experts. Phase II used the LF2 to assess the items within the AES, to determine if elements of leadership were being addressed and to determine any meaningful gaps. Because no meaningful gaps were found in Phase II, AES questions were categorized into leadership element indices consistent with the LF2. Based on the identified indices, Phase III compared AES responses of RNs, SWs, and case managers from 2018 and 2019 using Independent Samples T-Test and One-way ANOVA.

Major Findings

Phase I of the study was to determine if the LF2 could be used to identify leadership elements in questions like those on the VA survey. Subject matter experts on the LF2 categorized leadership elements with a high degree of reliability on repeat testing (87% and 95%). The

purpose of Phase II was to then use the same subject matter experts and leadership conceptual framework to categorize the actual AES questions according to the leadership overall dominant element. Phase II indicated almost perfect interrater agreement (92-100%) in the leadership categories on repeated categorization of the AES questions and no other leadership elements outside of the LF2 were identified. In addition, the AES questions were weighted with an uneven distribution of leadership elements identified across the AES questions. For example, communication, personal, and organizational elements were frequently addressed in survey questions, whereas character, context, competence, interpersonal, and team elements were infrequently addressed. These findings indicate the LF2 can be used as a tool for assessing leadership elements: 1) of RNs, SWs, and case managers from additional years, 2) for other disciplines, and 3) comparing RNs, SWs, and case managers to other disciplines from additional years.

In Phase III, the LF2 was utilized to assess leadership elements within the AES questions themselves. In this phase of the study design the AES questions were categorized into 13 indices according to their dominant leadership elements with results indicating a lack of questions in the leadership elements of context, competence, and team. Results in Phase III showed RN satisfaction and agreement mean response scores were higher and burnout scores were lower than SWs across years. When comparing within disciplines both RNs and SWs indicated an increase satisfaction and agreement on questions related to the leadership element of character and indicated increased scores related to mutual respect between VA senior leaders and the respondents. The one-way ANOVA was consistent with findings between disciplines and across years and further indicated no difference for RNs and SWs who were performing the duties of a case manager.

Implications and Applications

The VA AES was developed in 2001 to assess workforce satisfaction and has been refined over two decades in response to inquiries on VA organizational health and culture. However, no publications originating from AES or the National Center for Occupational Development (NCOD) were identified as applying a specific a leadership framework and employee responses.

There is literature to suggest the SW and RN professions complement each other particularly when providing case management and care coordination services (Booth-Thomas, 2017). Attention to the satisfaction of SWs to include compensation and respect for the complimentary work they do with RNs may affect job satisfaction, burnout and ultimately influence Veteran care coordination outcomes.

The elements of context, competence and team were under assessed on the AES questions on the 2018 and 2019 survey. However, the positive responses of RNs and SWs in the indices of character indicate a possible correlation between the I-CARE training offered in VA starting in 2016 and positive responses for 2018 and 2019 indicating the efficacy of this targeted training. The study results for the indices of character indicated the LF2 might be used to: 1) target other leadership elements, and 2) evaluate targeted leadership training and the efficacy of trainings based on VA AES employee responses.

Phase II results were documented prior to COVID-19 and subsequent changes made to workplace practices and telework expectations and mandates. Phase II indicated a dearth of questions related to the context and teams in which RNs, SWs, and case managers work. Adding questions related to context, teams, and competence may be of value as the changes in workplace environment continue to evolve. A deeper dive into the leadership areas of context and team is

advisable given the dramatic changes in 2020 due to Covid-19 and the general encouragement for telecommunications between Veterans and VA providers. Nurses, social workers, and case managers are connecting with Veterans by virtual video context (VVC) at increasing rates and are being encouraged to increase telerehabilitation contacts. It is unknown if the change of context and team support may influence AES responses or the satisfaction of Veterans, both of which, should be assessed striving for the optimal balance between virtual and face-to-face contact between healthcare providers and patients.

The identification of some leadership qualities consistent between SWs and RNs could be leveraged by VA decision makers providing targeted education and developing leadership qualities felt to be important. This approach could lead to the development of a more robust care coordination workforce. To avoid unintentionally biasing information obtained from AES responses, decision makers for the AES might consider revising the survey questions for a balance of questions on context (environment), teams, and competency.

The cause and explanation for why VA care coordination continues to be unsuccessful in managing Veteran care remains uncertain. However, it is clear these issues will be compounded by unprecedented legislative changes making a more precise understanding of the elements impacting VA case managers critical. Scientists from the VA Health Services Research and Development Evidenced-based Synthesis Program indicated research was needed to classify care coordination according to theory-based domains which included the context, communication skills, and competence of case managers. This study is the first of its kind to successfully evaluate the theory-based domains of context, communication, and competence as well as character, and the personal, interpersonal, team, and organizational psychosocial levels. The use of a theoretical framework, such as the LF2, is further recommended to evaluate the negative and

positive influences on case managers and the effectiveness of case management program implementation.

Study Limitations

The study had only two years of data due to only one year of responses specific to case managers (2019) as comparison with RNs and SWs. The LF2 was the single leadership framework used in this three-phased research study design. Further, the independent raters of the AES were subject matter experts on the LF2 and could have interpreted the AES with bias when applying the LF2. However, interrater reliability of greater than 80% is one assurance that the tool was measuring constructs consistently. Any discrepancies in rater scoring were also documented and discussed with Dissertation Committee members to increase reliability.

Results of the study may or may not generalize to the civilian, case management population because this is a study solely of VA case managers (Nohr & Liew, 2018). As previously indicated self-selecting for survey participation can bias results, because motivation may be different for non-participants. A high response rate is one assurance that the sample represents the population of non-participants (Nohr & Liew, 2018). While the sample groups are volunteers and easily accessible, the sample of RNs, SWs, and case managers are relatively large, and likely represent the population of these groups in VA.

Future Directions

In addition to the suggested directions under implications and applications, qualitative studies should be conducted to further confirm the results of the findings from this study. Interviews with RN, SW, and case management should be conducted, in the form of focus groups, to further ascertain the reasons why satisfaction is trending down and why burnout is trending up in these groups of VA employees.

The LF2 can be used for evaluating the AES annually as a consistent leadership framework. VA decision makers should consider whether the LF2 leadership elements are consistent with the mission and values of VA and use the LF2 to confirm the findings of this study and to assess future AES surveys and the responses of other employees.

The key findings, implications of study results, and logical next steps will be discussed and disseminated for potential influence and appropriate change on care coordination efforts in the federal healthcare setting. Key findings and potential policy recommendations will be shared with VA senior leadership and other stakeholders, and include; 1) addition of AES question constructs (competency, context, and team) to be targeted for future analysis using the LF2, 2) discussions and consideration to the influences on the dissatisfaction of SWs compared to RNs, and 3) follow-up assessments of RNs, SWs, and case managers in coming years using the LF2 to determine if changes discussed (#1,2) have made a difference.

Summary and Conclusion

In summary, the LF2 can be used to assess an employee survey for leadership elements with high interrater reliability. The AES was found to be weighted toward questions regarding communication, personal, and organizational leadership elements, but was lacking questions related to character, context, competency, interpersonal, and team leadership elements.

Using the LF2, the responses of RNs, SWs, and case managers from the 2018 and 2019 VA survey indicated employee dissatisfaction and increase burnout across leadership elements of communication, context, competency, personal, interpersonal, team, and organizational indices. These are important findings and concerning trends warranting further discussion and research. Further, the responses of RNs indicated greater satisfaction and less burnout than SWs. These findings were consistent whether RNs and SWs were in case management roles or not.

The responses of RNs, SWs, and case managers from the 2018 and 2019 survey for the two (satisfaction and agreement scale) indices of character, revealed increased satisfaction and decreased burnout. This finding is an indication that perhaps I-CARE training in VA impacted employee satisfaction and burnout in the areas of caring, personal accountability, and responsibility. However, there was a gap for assessing the excellence component of the I-CARE values as AES questions assessing competence were lacking.

As a tool in long standing, the AES should be evaluated using a consistent tool for interpretation from year to year. Consistency in interpretation of the AES will provide meaningful influence on VA employee experiences and will guide VA leadership in decisions.

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