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Leadership Attributes and Behaviors as Predictors of Organizational Resilience in Academic Health Care Systems

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Abstract

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by

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Abstract

Research intentionally addressing how leadership attributes and behaviors collectively contributed to the socioecological perspective of organizational resilience were not found. This is a problem for organizations who must hire without benefit of how a collective leadership effect might influence their psychological capital. The purpose of this study was to explore whether or not self-efficacy, psychological empowerment, personal resilience, and leadership style were associated with or predicted organizational resilience among clinical managers in an academic medical center setting. Metatheory of resilience and resiliency was used to frame the study. A quantitative correlational design was used. Self-reported data was collected via the Leader Efficacy Questionnaire, Psychological Empowerment Instrument, Connor and Davidson's Resilience Scale, Multifactor Leadership Questionnaire, and Workplace Resilience Instrument. Intellectual stimulation (r_s .480, τ .432, p = .00), personal resilience (r_s .483, τ .465, p = .00), and self-efficacy (r_s .522, τ .462, p = .00) had the highest statistical correlations to organizational resilience. Negative predictor effects were found for personal resilience and idealized attributes ascribed to self-oriented versus other-oriented resilience qualities, $x^2(2)$ = 50.70, $p < .01$, and $p < .05$ respectively. Resilience is important for organizational survival and adaptation to the external and internal forces of change. Resilient organizations with available reserves can collaborate with community leaders to optimize the social, environmental, and economic determinants of health foundational for community resilience and positive social change.

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Table of Contents

List of Tables

List of Figures

Chapter 1: Introduction to the Study

Collective leadership attributes and behaviors associated with organizational resilience in academic health care organizations were studied. The work was guided by resilience metatheory (Richardson, 2002). Employees make up organizations; therefore, from a social perspective their aggregated capacity for resilience in the presence of sufficient resources and decentralized decision making are reflective of a system's potential for organizational resilience and adaptive response (van der Vegt, Essens, Wahlstrom, & George, 2015). Health care system resiliency can be a valuable coping strategy amidst the daily uncertainties complex academic health care systems face. Resilient leaders with the courage and confidence to take purposeful action are able to direct these qualities inward to preserve organizational survival in response to the forces of change as well as outward into the community to fulfill corporate social responsibilities.

Efficacious, empowered, resilient leaders with transformational leadership attributes and behaviors are able engage in rapid decision making needed to tackle complex organizational demands. Conversely, leaders that fall short of sufficient protective factors are less likely to deploy effective coping strategies. It is in the interest of organizations to articulate the desired leadership attributes and behaviors that best fit the organizational culture. Findings of this study contributed evidence that supported correlative associations among self-efficacy, psychological empowerment, personal resilience, and leadership style with organizational resilience. This is important because I did not find previously published studies in which researchers intentionally considered

how leadership attributes and behaviors collectively contributed to the socioecological perspective of organizational resilience.

Background

In complex academic health care settings, leaders need to independently and interdependently respond to change demands even in the absence of sufficient facts. To effectively execute change demands, leaders must recognize that they have the authority to act, assemble organizational resources, and empower frontline decision making (Weick, 2009). Attributes and behaviors stemming from self-efficacy, psychological empowerment, personal resilience, and leadership style boost leaders' ability to detect situational vulnerabilities and follow through with appropriate measures that will positively affect organizational resilience (Lee, Vargo, & Seville, 2013; Masten, 2011; Windle, 2011). Weick (2009) stressed that for sense making action is needed in order to assess the challenge and determine further action. It is through this successful navigation of change that leadership self-efficacy and personal resilience are reciprocally reinforced (Bandura, 1988; Vogus & Sutcliffe, 2007).

Competent, confident, and ethical leaders inspire providers at the point of service, particularly during times of environmental instability, uncertainty, or rapid change (Bass, 1985, 1995). A full complement of transformational and active transactional styles is beneficial to one's role and the needs of the organization. A transformational style is optimal for change creation; however, a transactional style is useful in the delineation and definition of roles and the direction of tasks essential to outcome achievement (Clarke, 2013).

Health care organizations all face external pressures generated by the political, economic, and technological forces of health care reform, and academic organizations additionally face decreased federal revenues streams that have an effect on research and graduate medical education funding. At the point of service, internal pressures brought about by the physical, psychosocial, and ecological complexities of the patient populations served challenge providers on a daily basis. In addition to oversight for patient care leadership role functions may include program or revenue growth initiatives, elimination of process inefficiencies, and leveraging provider roles so that organizations can remain competitive. In the current study, I postulated that leaders in a complex academic setting who possess self-efficacy, psychological empowerment, resilience, and a transformational leadership style have the essential leadership attributes and behaviors to realize organizational resilience.

Problem Statement

The problem is that organizations hire individuals for leadership positions by placing emphasis on a leader's past experience without benefit of the knowledge as to how a collective leadership effect (e.g., attitudes, behaviors) might influence an organization's psychological capital. This is important because a cogent connection can be made from leadership behavior to member behavior, hence organizational culture. According to the European Agency for Health and Safety at Work (2014), collective leadership resilience has an impact on member personal wellness and productivity such that, when lacking, can divert scare health care dollars to cover potentially avoidable absenteeism and health care claims related to burnout, attrition, and other stress-related

illnesses. This translates into loss of productivity toward sustaining the organizational mission (European Agency for Health and Safety at Work, 2014).

Leadership style, particularly among frontline leaders who serve as a linchpin between providers and organizations, can affect providers' work commitment, performance, engagement, and satisfaction levels (Sahin, Cubuk, & Uslu, 2014). Providers respect leaders who view problem solving as an opportunity for growth and who relate daily work to a higher purpose aimed at the common good (Wicks & Buck, 2013). When leaders exhibit a high level of interpersonal and organizational trust and provide encouragement and support, providers feel sufficiently empowered to respond to early stressor signals and implement adaptive coping mechanisms (Vogus & Sutcliffe, 2007).

Purpose of the Study

The study purpose was to explore how self-efficacy, psychological empowerment, personal resilience, and leadership style might be associated with or predict organizational resilience among frontline leaders working in academic medical centers. Leaders needed resiliency to meet the needs of complex clients, manage unexpected events, address staffing needs, and handle high patient acuity as well as patient and employee satisfaction issues (Hart, Brannan, & DeChesnay, 2014). In turn, leaders must provide the contextual support to optimize provider resilience as they face their own day-to-day situational circumstances and provide contextual support for the resiliency of patients and families dealing with acute and chronic stressors. Stakeholders need to know

the desired leadership values, attitudes, behaviors, and competences related to organizational resilience so that apt leaders can be on boarded and empowered.

Research Question and Hypotheses

The proposed variable associations are based in Richardson's (2002) resilience metatheory in terms of how leadership attributes and behaviors affect positive or negative adaption within systems. Resilience denotes that a person or organization has sufficient protective factors available to cope with physical, psychological, or socioecological stressors (Rutter, 2012). Self-efficacy plays a role in resiliency, as one must believe that choice to take action will produce a result. Self-efficacy is contextually strengthened when one perceives that he or she has the requisite authority and resources to achieve a response (Conger & Kanungo, 1988). I hypothesized that a statistically significant relationship between self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience existed; however, such relationships were not extant in the literature.

RQ1-Quantitative: What is the relationship between self-efficacy, psychological empowerment, personal resilience, leadership style and organizational resilience?

Null Hypothesis ($H1_0$): There is no statistically significant relationship between self-efficacy, psychological empowerment, personal resilience, leadership style and organizational resilience.

Alternative Hypothesis ($H1_a$): There is a statistically significant relationship between self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience.

Theoretical Framework

Richardson's (2002) resilience metatheory was the theoretical framework in this study. Richardson approached resilience from a socioecological perspective that was relevant for leaders who face internal and external organizational stressors that require adaptive processes. Existing literature supported that cohesive support networks that provided a favorable environment in which to counter situational vulnerabilities and achieve positive adaptation positively affected biology, behavior, and motivation (Masten, 2011; Windle, 2011). Richardson noted that when an imbalance in equilibrium occurs, balance is sought in an effort to achieve a new level of adaption with new mechanisms learned, but if sufficient protective factors are not available, an individual or organization may become dysfunctional or fall into a state of destructive reintegration.

Nature of the Study

A quantitative correlational design was used to examine potential associations among attributes of self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience in a real-world setting. Self-efficacy and psychological empowerment may be drivers in the navigation of life stressors. Psychological empowerment is present when self-efficacious individuals' have the self-confidence, perceived role authority, and organizational resources to take action without fear of retribution (Conger & Kanungo, 1988; Maynard, Gilson, & Mathieu, 2012; Thomas & Velthouse, 1990). A psychologically empowered individual is under the perception that autonomous action will influence organizational process and outcomes in accordance with organizational values and beliefs (Dust, Resick, & Mawritz, 2014).

Psychological empowerment complements transformational leadership behaviors that transcend self to help others understand how their work contributes collectively to organizational goals. Transformational leaders exert idealized influence, inspirationally motivate others toward a collective vision, and provide intellectual stimulation and individualized consideration for members' personal and professional goals (Bass & Riggio, 2010). Transformational leaders affect provider feelings of self-efficacy, psychological empowerment, and engagement that collectively translate into a resilient and empowered organizational culture (Eberly, Johnson, Hernandez, & Avolio, 2013). I recruited leaders who manage direct care providers at the point of service were to participate voluntarily for this study and asked them to complete valid and reliable computer-assisted questionnaires to capture their self-reported data surrounding individuals' self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience. Correlation coefficients were conducted to evaluate independent to dependent and independent to independent variable relationships, and multinomial regression analysis was performed to determine if independent variables as predictors of organizational resilience could be found.

Definitions

Self-efficacy: The independent variable of self-efficacy was defined as the belief that one's personal action toward a desired goal would produce a result (Bandura, 1986, 1988, 2001). Self-efficacy was measured by the total assigned value as the total score by the Leader Efficacy Questionnaire divided by 22, which is the number of items as guided by the instrument manual (Avolio, Bass, & Jung, 1999). Potential participant scores could

range from 0 to 100 with 0 being *not at all confident*, 50 being *moderately confident*, and 100 being *totally confident*.

Psychological empowerment: The independent variable of psychological empowerment was defined as leadership attributes inclusive of intrinsic motivation, self-determination, and self-efficacy to act on environmental stressors within the organizational context of sanctioned role authority, clear organizational goals, and adequate organizational resources (Conger and Kanungo, 1988). Perceived psychological empowerment was calculated as the assigned value by the total score on Spreitzer's (1995) Psychological Empowerment Instrument divided by 72 the total possible responses to obtain a norming score per scoring instructions. Potential participant norming scores could range from 0 to 100 with scores closer to 0 indicative that the participant strongly disagreed that they were psychologically empowered and scores closer to 100 indicative that a participant strongly agreed that they were empowered.

Personal resilience: The independent variable of personal resilience was defined as energy coming from within that compels a person or system to make sense of adverse situations or stressors and then take intentional measures toward adaptation (Richardson, 2002). Resilience was measured using the assigned value by the total score on the Connor-Davidson Resilience Scale (Connor & Davidson, 2003). Potential participant scores could range from 0 to 100 with scores closer to 0 rated by the participant as *not true at all* whereas scores closer to a 100 rated by the participant as *true nearly all the time*.

Leadership style: The independent variable of leadership style was defined as one's traits, attributes, and behaviors that have a psychosocial effect on others during organizational interactions (Eberly et al., 2013). Leadership was measured using the assigned value on the subscale scores divided by the number of actual participant responses for transactional, transformational style, and laisse faire related questions on the Multifactor Leadership Questionnaire (Bass & Avolio, 2004). Potential participant scores could range from 0 to the 100th percentile with 0 percentile indicative that a particular style was not at all used up to the 100th percentile indicative that a style was frequently if not always used. Subscales representative of transformational leadership style included idealized attributes, the same as idealized influence; idealized behaviors, also the same as idealized influence; inspirational motivation; intellectual stimulation; and individualized consideration. Subscales representative of transactional leadership style included continent reward and management by exception active. Subscales representative of passive avoidant leadership style include management by exception and laissez-faire.

Organizational resilience: The dependent variable of organizational resilience was defined as the conscious cultural choice toward an outcome with the intention to achieve resilient reintegration and resolution (Richardson, 2002). Organizational resilience was noted as the assigned value by the total score on Mallak's (1998) Workplace Resilience Instrument. Potential participant scores on the Workplace Resilience Instrument could range from 20 to 100 with scores closer to 20 reflective of the perception that the organization is not at all resilient and scores closer to 100

reflective of the perception that the organization is resilient nearly all the time. There was no opportunity for the normal distribution of scores on this scale, therefore scores were placed into five data buckets that ranged from categorical one 20 through 36, categorical two 37 through 52, categorical three 53 through 68, 69 through 84, and categorical five 85 through 100.

Assumptions

Based in the positivism paradigm, I assumed that reality does exist outside of the human mind, hence it was feasible that relationships among self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience are discoverable. Study methods minimized the potential for bias, operationalized constructs were grounded in theory and deductive processes, and quantitative data measurement amenable to statistical analysis were used. Supported probabilistic associations could allow organizations to be more deliberate in their alignment of leader role selection with organizational values, mission, vision, and corporate social responsibilities.

Scope and Delimitations

A cross-sectional design was deliberately chosen for the efficiency of large volume data collection within a finite amount of time. A longitudinal design or a repeated measures design was not feasible for this study. However, use of such designs in the future could provide insight into the progression of self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience that could occur with successful experiences and reinforcement over time.

Limitations

Variables were examined within the context of real-world situations that negated an opportunity to establish whether or not one variable preceded or directly influenced another. The cross-sectional aspect of this study design limited participant responses to a fixed point in time that may have been influenced by historical factors or self-selection bias inherent in the use of convenience samples. Study findings added low level support to the existing body of evidence but were not generalizable beyond the defined population.

Significance

Resilient organizations have a corporate social responsibility to work with community leadership to restore and sustain the ecological, economic, and social capital in the communities they serve (Institute of Medicine, 2015). Academic medical centers tend to provide services within economically challenged inner city neighborhoods to individuals with social determinants that affect health (e.g., low socioeconomic standard of living, social isolation, limited health literacy), provide employment for residents living within those communities, and support additional community jobs and economic activity from goods and services purchased (American Hospital Association, 2015; Shi & Singh, 2012; van der Vegt et al., 2015). In order to thrive and survive, academic medical centers must have resilient leaders if the organization itself is to remain resilient and viable. When an organization's social, psychological, and financial capital is strong, leadership self-efficacy, psychological empowerment, personal resilience, and leadership style can be directed toward corporate social responsibilities related to community

population health, positive community adaptation, and social change (Cameron & McNaughtan, 2014). Organizational leaders working in tandem with community leadership can inspire collective community efficacy to take intentional action toward healthier populations and healthier community environments.

Summary

In order to thrive and survive, organizations need leaders with the requisite attributes and behaviors that afford them the ability to bolster organizational resilience. I conducted a review of the literature to obtain a foundational understanding of the current body of knowledge and comprehension of self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience as multidimensional constructs. I then reasoned that self-efficacy and personal resilience are exhibited at the micro individual level, psychological empowerment and leadership style at the meso level, and macro interactions with the organization and the community culminate in system resilience.

Chapter 2: Literature Review

Contemporary leaders are likely to be guiding a higher percentage of novice health care providers through daily change needs that require rapid decision making at the point of service (Weick, 2009). I surmised that self-efficacy, psychological empowerment, and personal resilience would be linked to transformational leadership attributes and behaviors. Individual resilience affords organizational leadership the collective ability to confront situational adversities and take the necessary transformational and adaptive steps toward organizational resilience (Masten, 2011; Windle, 2011).

Search Strategy

Health care research findings and innovation are produced at a rapid pace; therefore, a comprehensive search of the scholarly literature housed in Business Source Complete, Google, Google Scholar, Medline, PubMed, ProQuest Dissertation and Theses, PsychInfo, and Scopus focused on studies published between 2011 up through the last search in November of 2016. Search terms included full range leadership theory, empowerment, empowerment theory, leader, leadership, leadership style, management, organizational resilience, self-efficacy, self-efficacy theory, high reliability, psychological empowerment, resilience, resiliency, resilience theory, systems resilience, transformational, and transactional. Found works were published in English and independently addressed study variables or explored variable relationships. Definitive works that supported theory or instrument reliability and validation were included regardless of the publication date. Furthermore, if several studies cited a specific work or

works from a specific author, those works were also reviewed and included as I deemed appropriate.

Theoretical Foundation

Richardson's (2002) resilience metatheory was used as the theoretical framework for this study. Similar to the progression of leadership theory, resilience theory originally viewed resilience as an individual trait inherent to one's personality (Fletcher & Sarkar, 2013). Scholars then extended it to include protective factors resultant in a coping strategy that allowed one to bounce back from psychological stressors (Earvolino-Ramirez, 2007; Rutter, 2012), and it has emerged into metatheory conceptualized from a socioecological perspective of how individuals deploy adaptive processes within systems. Adverse experiences—acute or chronic—preclude the need for resilience, with the level of resilience culminating in consequences that may result in positive adaptation, dysfunction, or disintegration (Fletcher & Sarkar, 2013). Faced with environmental stressors, an individual must first appraise the situation, then execute coping strategies aimed at producing an adaptive response (Richardson, 2002). The healthy and resilient organization model put forth by Salanova, Llorens, Cifre, and Martinez in 2012 postulated that healthy employee relationships, organizational resources and practices, and organizational outcomes at the individual and team levels stemmed from socioecological aligned stressors and coping strategies at the micro, meso, and macro system levels.

The construct of personal resilience originated from the behavioral and social sciences, whereas organizational resilience emerged out of natural science and

subsequently was applied to organizational systems (Le Coze, 2015). Organizational resilience connects individual biopsychosocial phenomena to other individuals as well as environmental resources systems to effect adaption amidst environmental exchanges (Greene, Galambos, & Lee, 2004). Organizational resilience theory is comparable to teleological change theory in that it provided an explanation related to the collective motivation of organizational leaders to take on purposeful risks and direct resources in response to real or perceived environmental stimuli (Bekmeier-Feuerhahn, 2009). Riolli and Savicki's (2003) model conversely outlined that individual stressors stemming from the work environment and level of social support would manifest either as resilience or burnout, producing an effect on organizational resilience, productivity, and employee retention. While the work environment could bolster individual resilience, the authors did not support the idea that personal resilience could affect organizational resilience.

At the inception of personal resilience theory, Anthony (1987) assigned attributes to children he saw as "good copers" that included an ability to (a) positively express feelings, (b) express interpersonal insight into situations, (c) have a realistic view of the environment and translate thoughts, feelings, and ideas into action, (d) demonstrate an increased capacity to tolerate frustration, (e) handle anxiety, and (f) request assistance from others. These attributes were driven by a child's biological makeup and enhanced by caretakers who fostered space, safety, and freedom. In 1993, Rutter defined resilience as how well one was able to deal with stressors and execute the necessary actions to remove oneself from those stressful circumstances. Werner (1997) conducted a 40-year longitudinal study of a cohort of "at risk" multiracial children who had experienced

chronic poverty, perinatal stressors, parent psychopathology, and social stressors and found there was a link between individual traits—intelligence, temperament, physical attractiveness, personality, and environmental characteristics such as caretaker support. Bernard (1991) put forth a transactional-ecological model. In this model, personality and personal protective factors—social competence, flexibility, empathy, communication skills, problem-solving alternative solutions to cognitive and social problems, autonomy with a sense of separateness and independence—were important factors when accompanied by family, schools, and community caring, support, high expectations, and encouragement to participate related to one's ability to adapt to the surrounding environment. Garmezy (1991) similarly stated that protective factors along with feelings of power heightened active goal-directed behavior. Toward the end of the 1990s, Masten discussed the interconnectedness of biological attributes, behaviors, and self-efficacy that, when present in social relationships and workplace interactions, allowed one to favorably respond to adversity and achieve dynamic adaptation (Masten, 2011; Masten & Coatsworth, 1998; Windle, 2011).

Literature Review Related to Key Variables and Concepts

Self-efficacy is a key aspect of resilience as it gives one the motivational drive and planning needed to take a specific course of action with the intention of effecting an outcome (Bandura, 1997, 2001). Behavior is influenced by one's attitude surrounding the behavior, the perceived positive or negative social pressures, perceived knowledge, skills, and abilities, planning, time, opportunity, and external cooperation in support of executing the behavior (Ajzen, 1991; Ajzen & Madden, 1986). Behaviors are executed

within the context of organizational social pressures, opportunity, infrastructure, processes, and policies related to one's perception of psychological empowerment. Self-efficacy and psychological empowerment provide transformational leaders with attributes and behaviors that are essential to effecting environmental change (Howell & Avolio, 1993). A socioecological model permits the examination of leadership attributes and behaviors inclusive of reciprocal interactions between persons, processes, and context at varying levels (Bronfenbrenner, 1994, 1999).

Leadership Attributes and Behaviors

Scholars have put forth numerous leadership instruments based in theories or frameworks to measure leadership qualities. The Leader Behavior Description Questionnaire (Stogdill, 1963) was designed to assess leadership consideration and initiating structure. Other instruments include the Managerial Grid Assessment (Bernardin & Alvares, 1976), Fiedler's Least Preferred Coworker Questionnaire (Rice, 1978), Hersey and Blanchard's Situational Leadership Style (Hersey, Blanchard, & Natemeyer, 1979) , Leader-Member Relation Scale for team cohesiveness Ayman, Chemers, & Fiedler, 1995), Task Structure Rating Scale for goal path clarity (House, 1971), and the American Academy of Healthcare Executives Healthcare Leadership Competencies Assessment Tool (International Hospital Federation, 2015). Nevertheless, these proxy measures have not been found to sufficiently demonstrate how a leader's traits affect leadership effectiveness, attitudes, and behaviors (Antonakis, Day, & Schyns, 2012; Ayman et al., 1995; Deckard, 2009a, 2009b). Bandura (1986, 1988, 1997, 2000) found that confident individuals gave intentional thought as to how a course of action

might produce an outcome. Leadership self-efficacy had a statistically significant correlation with a leader's ability to sets team direction (r =.21, p < .05) and gain commitment (r = .20, p < .05) of others (Paglis & Green, 2002). Conger and Kanunago (1988) stated that self-efficacy was related to leadership efforts directed at overcoming barriers, unrealistic goals, or organizational bureaucracy that, when combined with organizational strengths, enhanced the ability for an adaptive response. Hospital managers self-reported resilient leadership qualities to be positive thinking, flexibility, accountability, and work-life balance (Kim & Windsor, 2015). Gibbons, Shafer, Aramanda, and Hickling (2014) deemed a sense of control, purpose, and social support to be central to psychological empowerment. Leadership competence and confidence are needed if others are to be inspired, the status quo challenged, a shared vision developed, and desired behaviors executed toward change (Kourzes & Posner, 2003).

The essential components of transformational leadership cause others to self-identify with the leader and personally engage in the need for change; however, leadership behaviors (e.g., integrity, fairness, persistence, determination) are what engender admiration, respect, and trust in the leader to lead the change (Bass, 1985; Bass & Riggio, 2010). Transactional leadership behaviors can be effective in maintaining the status quo within stable organizations as individuals pursue self-interests incentivized by contingent rewards or punishment, but transformational behaviors are needed to unite individuals around a common purpose for the greater good (Bass, 1997; Bass & Steidlmeier, 1999). Transformational leaders expand their own personal and professional growth as they support and motivate others to entertain innovative thinking, problem

solving, and attain organizational goals (Bass, 1985, 1995; Bass & Riggio, 2010; Howell & Avolio, 1993).

As change agents, charismatic leaders use the shortcomings of the status quo to stir discontent and motivate organizational change opportunities at the same time projecting a trustworthy and credible leadership image essential to fostering attitudinal change and action (Conger, 1999). There is a sense that charismatic transformational leaders possess moral conduct and have high performance expectations and thus are to be admired, respected, and trusted role models (Burke, 2014). Followers respond to a charismatic leader's confidence, expertise, empathy, enthusiasm, and conviction (Conger, 2010).

Leadership and the Perception of Psychological Empowerment

To be effective, leadership style must fit one's organizational role as well as the organizational cultural. To perpetuate a positive adaptive state, organizations need to empower people at the point of service to engage actively in problem solving, take risks, and be open to change (Conger, 1999; Conger & Kanungo, 1988). Optimal provider performance in academic health care settings demands that leaders have individualized consideration for others, sensitivity to others feelings, encourage participative decision making, and exhibit a willingness to take risks (Behling & McFillen, 1996). Individualized coaching, mentoring, role autonomy, and role challenge foster confidence in self as well as confidence in others (Bass, 1995; Bass & Riggio, 2010). Bass (1985, 1995) noted that transformational leaders motivate others to do more than they thought

they could do, raise consciousness surrounding matters of importance, and elevate others to rise above personal interests to focus and achieve organizational goals.

In a survey of hospital middle managers, Giaugue (2015) concluded there were statistically significant correlations between information and communication (r =.159; p <.000), employee voice and participation (r =.132; p, < .005), work relationships with colleagues (r =.073; p <.05), and work relationships with superiors (r =.207; p <.000) that were affiliated with a positive attitude toward change. Salanova et al. (2012) found significant correlations among healthy organizational resources and practices (R^2 = .91, p < .001), healthy employees (R^2 = .86, p < .001), and healthy organizational outcomes (R^2 = .67, p < .001) at the individual and team levels. Wei and Taormina (2014) noted correlations in health care providers determination (R^2 = .29, p < .001), endurance (R^2 = .17, p < .005), and adaptability (R^2 = .26, p < .001) that were significantly and positively related to personal resilience and nursing success. Psychological empowered leaders have the prerequisites to guide problem solving and execute task persistence needed to motivate others and inspire them to undertake change (Conger & Kananga, 1988; Maynard et al., 2012; Thomas & Velthouse, 1990). Sprietzer (1996) stated that when frontline leaders experienced control (β = .09, p < .05), strong sociopolitical support (β = .15, p < .01), access to information (β = .19, p < .01), in a participatory climate (β = .12, p < .01), that they felt empowered.

The concept of psychological empowerment is built upon the motivational aspects of self-efficacy within the context of leaders' perceptions of authority and resources to engage in decision making and execute action (Conger & Kananga, 1988; Maynard et al.,

2012; Thomas & Velthouse, 1990). Nurses deemed as resilient per the Connor-Davidson Resilience Scale 25-item scale were able to be positive even when indirect task performance satisfaction was absent (Gabriel, Dieffendorf, & Erickson, 2011). Maynard, Luciano, D'Innocenzo, and Mathieu (2014) found a relationship between psychosocial empowerment and performance relationships among nursing practicing in five U.S. hospitals via Spreitzer's 12-item Psychological Empowerment scale. However, performance evaluations as a proxy for performance relationships may not be a valid measure.

It is through psychological empowerment and the empowerment of others that mutual trust is developed and proxy agency the reliance on others is supported (Bandura, 1997, 2001). An organizational culture of coordinated human and financial resources promotes efficient and effective transformation of organizational inputs into outputs that are beneficial to organizational growth and maintenance of a steady state. It is imperative that leadership style is well aligned with one's role and the organizational culture. A transformational style is advantageous when there is a need to understand pressing organizational issues, enhance social networking, or communicate change goals, yet a transactional style is fundamental for task direction vital to achieving desired outcomes (Clarke, 2013).

Leadership and Resilience

Resilient and psychological empowered transformational leaders can translate into an empowered organizational culture (Eberly et al., 2013). However Sood, Sharma, Schroeder, and Gorman (2014) were unable to report a statistically significant change on

the Connor Davidson Resilience Scale (CD-RISC) 25-item scale of resilient measurement among physicians who completed a stress management and resiliency training curriculum nor was an interventional approach by Pines et al. (2014) found to cause a statistically significant change on student nurses' perceived empowerment or resiliency. These findings supported the assumption of resilience theory that resilience is primarily formed in childhood and cannot be learned.

Years of experience ($r = .158$, $p < .019$) and age ($r = .176$, $p < .009$) were found to be statistically significant in relation to resilience scores among paramedic (Gayton & Lovell, 2012) and resilience was found to have a moderating effect on negative life events and mental health problems among Chinese medical students accounting for 43.2% of variance (Peng et al., 2012). Perko and Knnunen's (2012) concluded that transformational leadership and meaningfulness of work were also protective mediators of employee wellbeing and job satisfaction.

Found studies focused on psychological empowerment and resilience as a personality traits though yet lacked clearly defined their operationalized constructs (Burnard & Bhamra, 2011; Cross, 2015; Earvolino-Ramierez, 2007; Fletcher & Sarkar, 2013; Francis & Bekera, 2014; Furlong, Harris, & Weaver, 2014; Hutter, Kuhlicke, Glade, & Felgentreff, 2013; Rutter, 2012). Studies have focused on resilience as a personality trait that can impact leadership ability but have not focused research on resilience as a coping strategy that collectively might be associated with an adaptive organizations (Gillespie, Chaboyer, Wallis, & Grimbeek, 2007; McDonald, Jackson, Vickers, & Wilkes, 2015; Wei & Taormina, 2014). Nor have studies been found that

explored potential of correlative relationships among self-efficacy, psychological empowerment, personal resilience, and leadership style as they might relate to overall organizational resilience.

Self-awareness and positive coping provide leaders with the confidence to make difficult decisions and adapt in a variety of situations. Integrity, positive self-worth, an optimistic worldview, accountability, effective communication, resourcefulness, and a flexible approach to stress management were self-reported leaders aspects of resilience (Helwig, 2013). Resiliency affords leaders the vigor and enthusiasm to confront change demands, manage heightened member emotions, quickly recover from disruptions, flexibly adapt into a new way of doing things, and learn from experiences (Howard & Irving, 2013; Li, Chun, Ashkanasy, & Ahlstrom, 2012). Early work focused on resilience as a personal trait that included a sense of self, determination and a social attitude (Dyer & McGuinness, 1996) later expanded to incorporate personal characteristics and behaviors surrounding a sense of humor, coping, flexibility, self-efficacy, control, competence, emotional intelligence, positive relationships, social supports, and adaptability (Earvolino-Ramirez, 2007; Gilllespie, Chaboyer, Wallis, & Grimbeck, 2007; Glass, 2009). More recent literature asserted resilience as a multidimensional construct comprised of determination, endurance, adaptation, and the establishment of a new steady state (Dinh, Pasman, Gao, & Mannan, 2012; Howard & Irving, 2013). Resilience strategies can mitigate errors and aid in error recovery (Weick & Sutcliffe, 2007). Gibbons et al. (2014) noted that psychological empowerment afforded a sense of control, purpose, and social support that were vital to positive coping ability. There are situational

contexts when leaders are obligated to take intentional action without benefit of knowing whether or not positive or negative results will ensue (Weick, 2009). Resilience provides the incentive to confront issues and overcome barriers so that new learning and adaptation can occur (Howard & Irving, 2013; Li et al., 2012).

Resilience leadership emerges out of knowledge of self, others, and the system (Weick & Sutcliffe, 2007). Health care providers at the point of service need support from leaders who are cognizant their leadership strengths and weakness, capable of making difficult decisions, and flexible enough to adapt to a variety of situations. Mauding, Peters, Roberts, Leonard, and Sparkman (2012) found emotional intelligence and resilience to be significant predictors of successful leadership. Additional statistically significant positive correlations were demonstrated between physician resilience and work engagement (r =.31; p < .01), self-efficacy and work engagement (r = .30; p < .01), and optimism and work engagement (r =.32; p < .01) as published by Mache, Vitzthum, Wanke, Groneberg, Klapp, and Danzer (2014). Harland, Harrison, Jones, and Reiter-Palmon (2005) supported a link between resilience and leadership among business administration students via Bass and Avolio's (2004) Multifactor Leadership Questionnaire (MLQ 5xO) with a positive relationship between member resilience and leadership charisma (r =.21; p < .01), idealized influence (r =.22; p < .01), inspirational motivation (r =.14; p < .05), intellectual stimulation (r =.27; p < .01), individual consideration (r =.27; p < .01) and contingent reward (r =.23; p < .01). These studies support self-efficacy as a foundational concept for psychological empowerment within

situational context and the social reciprocity discussed within the transformational model of leadership.

Leadership Style

Leadership style needs to resonate with organizational culture and environmental pace and demands for change. Pieterse, Van Knippenberg, Schippers, and Stam's (2010) found demonstrated a statistically significant positive relationship between psychosocial empowerment and transformational leadership ($b = .29$, $\beta = .25$, $p = .03$) and Hannah, Walumbwa, and Fry's (2011) work supported the hypothesis that leader authenticity could be transferred from the team leader to team members. Leadership theory began to emerge in the late 1800s first as trait theory that espoused that great natural leaders were born with the drive, desire, motivation to lead, and were in possession of honesty, integrity, self-confidence, and intelligence (Kirkpatrick & Locke, 1991). This was followed by the Ohio State leadership studies that discredited innate leadership traits and supported a link between task oriented and relationship oriented leadership behaviors and member performance (Nahavandi, 2014) that led behavioral theorist to examine leadership within a contingency and situational context. Situational models stressed that leaders needed to possess manager and leadership behaviors inclusive of interpersonal skills and member engagements skills in order to effect member performance (Ayman et al., 1995; Balkundi & Kilduff, 2006; Hersey & Blanchard, 1996; Hughes, Ginnett, & Curphy, 2010).

Contemporary leadership styles are based in a transactional, transformational, or laisse-faire styles. A transactional style is contingency based using tangible rewards to

gain member adherence to organizational policies and processes. A transactional style is most appreciated by members with a high avoidance for risk and a preference for the status quo with a tolerance level for gradual evolutionary change whereas a transformational style is well-matched to those who are open to uncertainty and a willingness to undertake new experiences encountered in revolutionary change (Burke, 2014). A leader's style needs to complement the pace of organizational change as well as the organization's capacity for change, information and communication transparency, and members' tolerance for uncertainty.

Transformational behaviors are especially needed when environmental conditions generate fear, anxiety, and psychic distress when organizational crisis, dysfunction, or uncertainty is perceived (Behling & McFillen, 1996). It is the charismatic aspect of transformational leadership that rallies member emotions, incites discontent for the status quo, puts forth an attractive alternative course of action, and through the expressed leader's confidence that fosters collective efficacy (Bass, 1985; Conger, 1999). In a simulation of combat Bass, Avolio, Jung, and Berson (2003) reported a statistical significance for transformational and transactional contingent reward leadership among platoon leaders and sergeants with respect to unit potency, performance, and cohesion with the mean r_{wg} value for the platoon leaders transformational leadership .80, .78 for sergeants and transactional contingent reward .87 for the platoon leaders and .82 for sergeants as related to unit potency .90 and unit cohesion .88. It is the origin of leadership, behaviors, affect, cognition, values, and social event cycles that are inherent

in leadership theories however formal role, organizational structure, and organizational culture are also important.

Leaderships' Collective Role in Organizational Resilience and Social Responsibility

Organizational resilience concepts have emerged out engineering and cognitive science high reliability research carried out by social scientists. Studies have been directed toward the study of leadership-frontline patterns of interaction within the situational contexts specific to complex organizational or industry operations to better understand of real time problem solving aimed at mitigating or reversing unacceptable organizational consequences (Le Coze, in press). From a system perspective resilience is a multifaceted concept that acknowledges that organizational systems are capable of varied responses when faced with disruptions yet when accompanied by higher level thinking and sense making are more likely to implement a resilient and adaptive response that is followed by organizational learning (Francis & Bekera, 2014; Lee et al., 2013; Maitlis & Christianson, 2014; Thiel et al., 2012). Limnios, Ghadouani, and Schilizzi (2014) noted that an adaptive response afforded flexible organizations the opportunity to reconfigure however some highly flexible yet highly unstable organizations may not be able to adapt if they react defensively or if they are too vulnerable to change may experience various stages of decline. Adaptive capacity is strengthened when resilience strategies are executed, silos are minimized, sufficient resource capacity is available, staff is engagement, information and knowledge are shared, effective leadership is present, and the opportunity for innovation, creativity, participatory decision making, and situational monitoring exists (Lee et al., 2013). Reason (2000) equated high reliability organizations

with resilient systems. High reliability organizations are preoccupied with failure, have a reluctance to simplify interpretations, defer to those with the expertise, sensitive to operational processes, and committed to being resilient (Weick & Sutcliffe, 2007).

Bandura (1997, 2001) described collective agency as the social reliance on others to act on one's behalf and House and Howell (1992) discussed that visionary leadership, transformational leadership, inspirational leadership, and charismatic leadership behaviors all have a fundamental purpose intended to move members beyond self to collective interest to create broader change. Moral leaders liberate members' potential and create a sense of responsibility toward a greater good (Kourzes & Posner, 2003). Transformational leaders see how individuals are interconnected to the bigger picture that commands a moral obligation and commitment to others in the community (Bass & Steidlmeier, 1999). It the leader's approval that creates a cycle of member obligation and responsibility to the leader (Conger, 1999). Such leadership behaviors are essential for health care leaders to make quick decisions in a fast paced high risk environment in order to take actions that satisfy the needs of patients, providers, and the organization.

Summary

Found studies were conceptually vague as to how the construct of resilience was operationalized (Burnard & Bhamra, 2011; Francis & Bekera, 2014; Fletcher & Sarkar, 2013; Hutter et al., 2013;) and did not examine potential correlative relationships among self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience therefore it was not known if or how these variables might contribute to the psychosocial aspects of organizational resilience (Lee et. al., 2013;

Vogus & Sutcliffe, 2007; Weick, Sutcliffe, & Obstfeld, 2005). It was the intention of this to inform how these variable might be beneficial to organizations in terms of organizational resilience, adaptation, and sustainability.

Chapter 3: Research Method

Research Design and Rationale

A quantitative correlational design was used to compare the naturally occurring attributes of self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience via participant self-reported questionnaires from a single stage convenience sample. A correlational design was chosen so that probabilistic variable associations in the study setting could be measured and lend preliminary credibility or refute any possibility of causal relationships (Campbell & Stanley, 1963). The design allowed for a large amount of data to be collected in an efficient manner and produced quantitative data amenable to statistical correlative and regression measures. Still, use of a correlational design posed threats to internal validity in terms of temporal ambiguity, participant selection bias, history of concurrent events, maturation of naturally occurring change, participant attrition, testing effects of self-reported data, and variability related to instrumentation measurement.

Population

Previous research addressed resilience among paramedics (Gayton & Lovell, 2012), nurses (Gabriel et al., 2011; Maynard et al., 2014; Pines et al., 2014), frontline and middle hospital managers (Giaugue, 2015; Kim & Windsor, 2015;), nursing executives (Mallak, 1998), and physicians (Mache et al., 2014; Peng et al., 2012; Sood et al., 2014). Psychological empowerment has also been studied among nurses (Kraimer, Seibert, & Liden, 1999) whereas available leadership studies had not specifically included a population of health care leaders. Studies whose identified population related to frontline

leaders whose supervisory role included leading licensed professions practicing at the point of service were most relevant to this study.

Sampling and Sampling Procedures

The accessible population was composed of approximately 346 leaders who supervised licensed health care professions who delivered patient care in two inpatient and 14 outpatient settings within an academic health care system in the Midwest. Research design inclusion criteria were defined as frontline patient services leaders with a formal supervisory role for licensed health care providers practicing at the point of service. Those identified as leading licensed health care providers not practicing at the point of service, having informal leadership roles, or having supervisory roles leading nonlicensed health care providers were excluded from study participation. The sampling frame was obtained via a patient services leadership e-mail list and an organizational intranet search within the study setting for those with the title of clinical manager, clinical director, or clinical lead.

The population sampling frame was necessitated by the need for a finite enrollment period . All known eligible leaders at the time of study recruitment were invited to participate. I acknowledged that a convenience sampling from the accessible population at the time of study enrollment would not necessarily be representative of the overall target population (Polit & Beck, 2012). Demographic ranges related to gender, age, years of licensed professional experience, and years as a frontline manager were also collected.

Procedures for Recruitment and Data Collection

The research proposal was submitted to the Walden University Institutional Review Board (IRB) and the organizational setting's IRB. The site IRB study identification number 2016-2833 served as the IRB of record for data collection and Walden IRB study number 06-17-16-0305079 was issued upon approval for data analysis. Data collection commenced in summer of 2016 post notification that the study was exempted by the site IRB, with approval for data analysis from Walden IRB obtained shortly thereafter. Participants were recruited via open advertisement that was repeated in two additional recruitment e-mails spaced about ten days apart. There were not any collegial or subordinate power relationships between me as the researcher and participants. Because I was also an employee within the study setting, it was possible that participants might have perceived the possibility of coercion, undue influence, or breach of confidentiality (Walden University, n.d.). Thus, participant anonymity was preserved via self-reported responses to mitigate any response bias and lessen any participants' concerns that their responses might affect future performance evaluations, salary increases, benefits, or job advancement (Office of Human Research Protection, 2010).

A written informed consent was attached to the recruitment e-mail and included the study purpose, inclusion and exclusion criteria, voluntariness of participation, estimated time commitment, study process, foreseeable risks or expected benefits, steps taken to safeguard participants confidentiality, third party contact for questions, and approximate number of persons needed to sufficiently conduct the study (Code of Federal Regulations CFR **§** 46.116, 2009). A formal consent signature was not required.

Voluntarily initiation of the instruments was indicative of participants opting into the study. The first two responses in the demographics section asked participants to respond *yes* or *no* that they consented to participate in the study and *yes* or *no* that they met the study criteria. If participants answered no to either question, they were instructed not to proceed as their responses would not be included in the aggregated data analysis. Demographics collected included gender, age range (millennials- 18 to 37 years, generation X- 38 through 51, baby boomers- 52 through 70, or traditionalists- 71 or older), and years of professional and leadership experience, based in Benner (1984): beginner: 0 to 1 years, competent: 1 to 2 years, proficient: 3 to 5 years, or expert: greater than 5 years. Self-selected eligible participants were used for practical reasons with the understanding that sample's characteristics may be over- or under representative of a typical population.

A list of all U.S. frontline health care managers that met the study inclusion criteria was not readily available, negating the possibility of random sampling. Strata or multistage sampling was not feasible due to time restraints. Snowball sampling was not necessary as it was determined that a sufficient number of participants could be gleaned from the accessible population. Quota sampling based on demographic characteristics unnecessary due to the restricted the sample size. Notably, consecutive sampling could have addressed a time related bias (Polit & Beck, 2012).

A confidence interval of 95% was used so that 95 out of 100 intervals constructed from the sample population of the same sample size would contain the true population mean parameter (Fulton, Mendez, Bastain, & Musal, 2012). To reduce the risk of Type II

errors, G*Power (Faul, Erdfelder, Lang, & Buchner, 2007), a free standing power analysis program, was used to input significance level, stated statistical power, and effect size to determine an a priori sample size. No relevant variable relationships were found in the literature, therefore an effect size of 0.3 as a moderate linear correlation for social sciences research was used that estimated that a sample size of 82 participants was needed with 80% statistical power and an alpha of .05 for the correlation coefficient and for multinomial regression $p_1 = .30$ and $p_2 = .70$ with a .7/.3 odds ratios = 5.44 for predictor X_1 with a normal distribution that estimated a sample size of 122 participants. According to Hsieh (1989), a univariate logistic regression with 50 scores at one standard deviation above the mean when $\alpha = 5$ and $1 - \beta = .80$ would require a sample size between 126 and 164 participants or 97 to 126 participants if $\beta = .70$.

Instrumentation and Operationalization of Constructs

The 22-item Leader Efficacy Questionnaire (Hannah, Avolio, Walumbwa, & Chan, 2012), the 12-item Psychological Empowerment Instrument supported by the work of Spreitzer (1995), the 25-item CD-RISC supported by the research of Connor and Davidson (2003), the 45-item Multifactor Leadership Questionnaire developed by Avolio et al. (1999), and Mallak and Yildiz's (in press) Workplace Resilience Instrument were used to collect latent variable data. These Likert responses provided ordinal level data.

The Leader Efficacy Questionnaire (Hannah et al., 2012) was designed to capture self-efficacy, confidence in one's capabilities to lead, and means efficacy, which addressed environmental resources that also influence performance. The self-efficacy items focused on leadership aspects of motivating, coaching, inspiring others, and getting

others to identify with organizational goals, and leader self-regulation efficacy that accounted for cognitive ability involving complex situations, sense making, and one's ability to motivate executive effective leadership. Means efficacy measured the leader's perception surrounding the ability to deploy human and organizational resources. Reliability coefficients in adult workers $N = 303$, actions .90, means, .65, $p < .01$, and self-regulation .69, $p < .01$ and in mid-senior level officers $N = 265$, actions .90, means, .56, $p < .01$, and self-regulation .67, $p < .01$ (Hannah et al., 2012). In 2008, Hannah, Avolio, Luthans, and Harms (2008) reviewed the literature related to leader efficacy and concluded that leaders with higher levels of self-efficacy performed at higher levels that were moderated by task demands and context that allowed them to adapt across situational contexts. This reinforced self-efficacy and the efficacy of others that across time resulted in a shared mental model and collective efficacy. Permission to use the intact questionnaire was obtained from the authors (personal communication, June 22, 2015) for study use.

The Psychological Empowerment Scale (Spreitzer, 1995) was designed to measure the construct based in the theoretical dimensions of meaning, competence, self-determination, and impact within the organizational setting. The instrument was supported by original work for the construct among $N = 393$ managers from an industrial company and $N = 128$ employees from an insurance company. With α .72 and .62 respectively for the overall empowerment construct, self-esteem ($\gamma = .15$, $p < .001$) and access to information about the organizational mission ($\gamma = .45$, $p < .001$) were statistically significant to empowerment in the industrial sample, and information about

unit performance ($\gamma = .42$, $p < .001$) and rewards ($\gamma = .21$, $p < .01$) were statistically significant to empowerment in the insurance sample. Kraimer et al. (1999) completed a confirmatory factor analysis on Spreitzer's scale that examined construct validity using a sample of 160 nurses and cross-validated findings in a subset of the same sample 1 year later and found convergent and discriminant validity for the scores were upheld for all four dimensions with test-retest reliability reported as .80. Permission was granted by the author (personal communication, June 17, 2015) for use in this study.

In a methodological review of resilience measurement scales, Windle, Bennett, and Noyes (2011) reported the Connor-Davidson Resilience Scale (Connor & Davidson, 2003), The Resilience Scale for Adults (Friborg, Hjemdal, Rosenvinge, & Matinussen, 2003), and the Brief Resilience Scale (Smith, Dalen, Wiggins, Tooley, & Bernard, 2008) to have the most sound psychometric properties. The Connor-Davidson Resilience Scale (Connor & Davidson, 2003) was designed as a self-reported scale to measure one's ability to cope with stress based in personal competence, strengthening effects of stress, and change acceptance. Windle et al. (2011) rated the Connor-Davidson Resilience Scale- 25 item the highest as related to content validity, internal consistency, criterion validity, construct validity, reproducibility agreement, and test-retest reliability. The Connor-Davidson Resilience Scale has been used to study military medical personnel (Sood et al., 2014), nurses (Gabriel, et al., 2011), and paramedics (Gayton & Lovell, 2012). The authors granted permission (personal communication, June 22, 2015) to use the intact scale for this study. Connor and Davidson (2015) reported test-retest reliability for the CD-RISC to be ($r = .87$). External validity as evidenced by U.S. published mean

scores with standard deviations in parentheses related to health care providers under stress were reported to be medical internals *N* = 205, *M*=76 (11.0) by Laff in 2008, medical interns *N* = 740, *M* = 75.3 (11.9) by Sen et al. in 2010, nurses *N* = 57, *M* = 66.5 (13.4) by Gabriel et al. in 2011, and radiology physicians *N* = 13, *M* = 70 (12.8) by Sood et al. in 2014.

The Multifactor Leadership Questionnaire (MLQ 5Xshort self-report) was designed to measure self-perception of leadership type (e.g., transformational, transactional, laissez-faire) in accordance with five subscales of transformational leadership (i.e., idealized influence, inspirational motivation, individualized consideration, intellectual stimulation), three subscales for transactional leadership (i.e., contingent reward, management-by-exception-active, management-by-exception-passive), and one subscale related to laisse-faire non-leadership (Avolio et al., 1999). Internal consistency was established from an original sample set *N* = 1,394 and a replication sample set *N* = 1,498 with α .92, .92 for charisma, α .83, .78 for intellectual stimulation, α .79, .78 for individualized consideration, α .80, .74 for contingent reward, α .63, .64 for management by exception active, and α .84, .86 passive avoidance (Avolio & Bass, 2004). Lowe, Kroeck, and Sivasubramaniam (1996) supported a correlation between leadership style and transformational scales (charisma, individualized consideration, intellectual stimulation respectively [.71, .61, .60]) and transactional scales (contingent reward, management-by-exception [.41, 05]). Fuller, Patterson, Hester, and Stringer (1996) in a meta-analysis with *N* = 4,611 participants and 27 correlations reported a mean correlation of .45 between charismatic leadership and performance, .78

between charismatic leadership and perceived leader effectiveness, and .80 between charismatic leadership and satisfaction with the leader. Dumdum, Lowe, and Avolio (2002) extended the work of Lowe et al. and reported positive correlations between the transformational leadership subscale and satisfaction and effectiveness respectively: attributed charisma .68, .90, idealized influence .68, .73, inspirational motivation .57, .73, and individualized consideration .59, .81. In 2009, Schriesheim, Wu, and Scandura (2009) questioned content validity related to item connotations. The questionnaire has been widely used in health care with recent examples of questionnaire usage in health care settings that included Carlton, Holsinger, Riddell, and Bush (2015) to measure leadership style in public health directors, hospital leaders (Carr, 2014; Frazier, 2014; Hassell, 2014), and nurse managers (Manning, 2014). Permission was granted (personal communication, June 21, 2015) to use the intact scale for this study. Administration cost was $100 per quantity of 50 participants.

Rowold and Heinitz (2007) studied the convergent, divergent, and criterion validity and found that transformational and charismatic leadership had a 78% convergent validity and were divergent from transactional leadership over large samples from diverse organizational settings. Muenjohn and Armstrong (2008) tested three models with confirmatory factor analysis and found the full scale to significantly depict the constructs of transformational and transactional leadership. Also, Hinkin and Schriesheim (2008) tested the theoretical and empirical properties of the transactional and laisse-faire subscales and recommended that management-by-exception-passive Items 4 and 6 be eliminated as well as laisse-faire Item 2 to improve the validity of these

subscales. Schriesheim et al. (2009) noted that the scale's psychometric and theoretical work was based at the individual level of analysis. However, the authors cautioned that with content validity there was the potential for mixed connotation of items among individuals, groups, and organizations. Avolio and Bass (2004) spoke to external validity based in four meta-analyses published in military and organizational psychology literature that supported that in empirical studies using the Multifactor Leadership Questionnaire there was a strong positive correlation between transformational leadership and performance.

Mallak (1998) originally developed bricolage, attitude of wisdom, and virtual role system scales related to organizational resilience that he updated from work in 2015. Permission (personal communication, May 20, 2015) was been granted to use this tool in the study. Through confirmatory factor analysis Mallak studied organizational resilience among acute health care nursing executives and found goal-directed solution seeking, avoidance or skepticism, critical understanding, role dependence, source resilience, and access to resources to be metrics of resilience to which Somers (2009) extended to include decision structure and centralization, connectivity, continuity planning, and agency accreditation to the organizational resilience potential scale. Mallak and Yildiz's (in press) instrument was developed based on samples of executives $N = 177$ and nurses $N = 363$ working in hospital settings within the United States and demonstrated internal consistency across workplace resilience- active problem-solving, team efficacy, confident sense-making, and bricolage α .77-.83, inter-factor correlations for sub-scales $p < .05$, and statistically significant differences related to gender and age. Another organizational

scale was published post study proposal development by Kantur and Iseri-Say (2015) derived from interviews and focus groups comprised of participants from industrial backgrounds that culminated in a 9-item scale with a reported Cronbach's alpha of .85. Existing research grounded in theory and has been cited as evidence of construct validity for use of the stated questionnaires within health care providers. Reliability of questionnaire use was enhanced by participant directions to respond to questionnaires when well-rested and in an undisturbed, comfortable, and quiet environment.

Threats to Validity

Variables examined within real world settings were chosen so that found probabilistic relationships could be supported. Concerns regarding external validity and accuracy of self-reported data were outweighed against the benefits of participant freedom and confidentiality. It was acknowledged that errors in measurement were possible due to potential situational contaminates from environmental factors, transitory personal factors such as a participant's mood or motivation to participate at the time of self-reporting responses, participants perceived clarity related to self-enrollment and instrument directions, as well as instrument design. Data collected at a fixed point in time was subject to influence of historical factors. Self-selection of participants posed a potential risk that the sample was over or under representative of the stated population nullifying an ability to generalize study findings beyond the study population.

Nevertheless use of a quantitative cross-sectional correlational design to elicit participant self-reported data via valid and reliable questionnaires inclusive of the Leader Efficacy Questionnaire Hannah et al., 2012), Spreitzer's Psychological Empowerment

Instrument (1995), Connor and Davidson's Resilience Scale (2015), Avolio and Bass's Multifactor Leadership Questionnaire (2004), and Mallak and Yildiz's Workplace Resilience Instrument (in press) will benefit this leadership population and contribute to the body of evidence surround desired leadership values, attitudes, behaviors, and competences that may be associated with organizational resilience.

Chapter 4: Results

Data were collected and analyzed in order to support or refute statistically significant relationships between the independent constructs of self-efficacy, psychological empowerment, personal resilience, and leadership style, and the dependent construct of organizational resilience among frontline leaders in academic medical centers. The null hypothesis was that there was no statistically significant relationship between the independent and dependent variables whereas the alternative hypothesis contended that there was a statistically significant relationship in the identified population. Data were collected via self-reported Likert style responses to items from the Leadership Self-Efficacy Questionnaire (Hannah et al., 2012), the Psychological Empowerment Instrument (Spreitzer, 1995), the Connor-Davidson Resilience Scale (2015), the Multifactor Leadership Questionnaire Avolio & Bass, 2004), and the Workplace Resilience Instrument (Mallak & Yuldiz, in press) and scored as stated in the operational definitions. Nonparametric correlation coefficients were conducted to evaluate whether or not independent to dependent or independent to independent variable relationships existed. Multinomial regression analysis with bootstrapping at 1,000 replications was performed to assess the ability of independent variables to predict organizational resilience.

Data Collection

Permission for use of all questionnaires was received prior to proposal development and reconfirmed prior to the intention to proceed with data collection in the summer of 2016. One hundred and fifty user licensures were purchased as required for

use the Multifactor Leadership Questionnaire from Mindgarden. Data collection occurred from June 3, 2016 through July 15, 2016. Recruitment flyers were sent to 339 potentially eligible participants that were identified by role titles and a management e-mail group list. Per permission instructions, Mindgarden was copied on the participant recruitment e-mail and link to the survey so that they could verify that the required instrument ownership was referenced related to the Multifactor Leadership Questionnaire (personal communication, June 13, 2016). Out of 339 questionnaires sent, 170 participants clicked on the link to start the leadership survey and 94 participants stated that they consented to participate, met the inclusion criteria, and completed all instruments for a 28% completion rate. Two people clicked on the survey link and closed out of the survey without addressing any questions, one person noted that they did not want to participate and did not proceed past the demographic section, 12 people noted that they did not meet the inclusion criteria, and 61 people only completed part of the survey instruments. It is possible that not every person on the management e-mail list were leaders (e.g. administrative assistants) or had role responsibilities that did not meet the inclusion criteria, thus 339 is a reasonable approximation rather than an exact number.

Participant response during the first 2 weeks of data collection was slow, with only 37 participants who had initiated or completed instrument responses followed by a spike in participation after the second recruitment flyer that resulted in 116 participants who had initiated responses followed by a few more participants clicking on the participation link during the final 2 weeks of recruitment. I decided not to include patient services educators as a potential means to add 149 additional potential participants

because I deemed leadership responsibilities of the educator role as indirect and aligned with the stated inclusion criteria. At the end of the data collection period, there was sufficient power to perform the correlation coefficient. However, it was not sufficiently powered for predictive analysis.

I was unsuccessful in obtaining population demographics for leadership titles that encompassed patient services (e.g., clinical managers, clinical directors, occupational coordinators, physical therapy coordinator roles, leads). The site human resources department cited that they were unable to provide the requested population demographics because there was no accurate way to extract and quantify these data (personal communication, July 1, 2016). Therefore, it cannot be known how representative the sample is in comparison to the population.

Structured response format surveys were used as the method of data collection so that broad access and responses from the entire population of frontline clinical leaders could be obtained in a timely fashion. E-mail instructions asked participants to complete all questionnaires preferably in one sitting or at a minimum within a 5-day period in a quiet uninterrupted environment while keeping the events over their last month of work in mind. The privacy and anonymity of internet surveys afforded participants the opportunity to truthfully self-report responses without any concerns for retribution. The list of potentially eligible participants was ranked ordered into five e-mail groups for the purpose of rotating the order of questionnaire presentation to lessen interactive influences from responses. This provided a measure of control related to internal validity (e.g., history, maturation, testing).

Instruments were administered via a Research Electronic Data Capture (REDCap), a secure, web-based application designed to support data capture inclusive of validated data entry, audit trails, and data download to statistical packages (Harris et al., 2009). This approach allowed me to collect de-identified responses and fulfilled permission requirements for instrument use. The database was constructed after I attended two formal training sessions and reviewed tutorials and written resources. Post IRB review, permission for project setup was granted by the REDCap administrator, which enabled my ability to electronically create the data dictionary and electronically recreate instruments via the online designer. Instruments and data capture were tested and then placed into production for active recruitment of participants. I retrieved unique public survey links for each group and affixed to the recruitment flyers information. Completed questionnaire responses were anonymously entered into REDCap, from which I could monitor participant completion and download raw scores for each response to each instrument. Study data were confidentially stored within REDCap for an indefinite period of time.

Data Analyses

Raw data for each group were downloaded from REDCap into an Excel file. Leadership efficacy responses were totaled for a maximum score of 1,000 and then divided by the number of items (i.e., 22) to obtain an individual average score for each participant. The Psychological Empowerment responses were totaled for a maximum score of 72 and then normed to determine an average score. The CD-RISC scoring entailed summing the total of all items for a maximum score of 100. The Multifactor

Leadership Questionnaire items were totaled by subscales to determine associated percentiles and the Organizational Leadership scores were totaled for all items with a possible maximum score of 100.

Then data were uploaded into SPSS statistical analytical software to perform correlation coefficients in order to evaluate whether or not independent to dependent or independent to independent variable relationships existed (e.g., positive, negative, nonlinear, none). Spearman's rho and Kendall's tau coefficients non-parametric statistics were run. Bootstrapping at 1,000 replications was employed to obtain confidence intervals. Multinomial logistic regression was conducted to determine if predictive relationships among self-efficacy, psychological empowerment, personal resilience, leadership style, and organizational resilience could be statistically supported.

Results

Demographic data related to gender, years of professional experience, and years of leadership experience were skewed and graphed (Table 1, Figures 1 through 4.), but not included in variable analysis.

Table 1

*Participant Characteristics (N = 94)**

Measure	Millennials age 37 or less	Generation X ages 38 - 51	Baby boomers ages 52 - 70	Traditionalists Age 71 or older
Age	15 (15.9%)	42 (44.7%)	37 (39.3%)	0
Female *N* = 79	11 (13.9%)	37 (46.8%)	31 (39.2%)	0
Male *N* = 15	4 (26.6%)	5 (33.3%)	6 (40%)	0
Years of professional				
experience	0	0	0	0
0 – 1 years	0	0	0	0
1 - 2 years	1 (1.0%)	0	0	0
3 – 5 years	15 (15.9%)	41 (43.6%)	37 (39.4%)	0
>5 years				
Years of leadership				
experience				
0 – 1 years	3 (3.2%)	1 (1.0%)	1 (1.0%)	0
1 - 2 years	4 (4.3%)	3 (3.2%)	1 (1.0%)	0
3 – 5 years	4 (4.3%)	4 (4.3%)	0	0
>5 years	4 (4.3%)	35 (37.2%)	34 (36.1%)	0

Note. Out of 339 questionnaires sent, 170 participants clicked on the link to start the leadership survey with 94 participants completing all instruments per stated inclusion criteria.

*Two people clicked on the take the survey link and closed out of the survey without addressing any questions, one person noted that they did not want to participate and did not proceed past the demographic section, 12 people stated that they did not meet the inclusion criteria, and 61 people only completed part of the survey instruments. It is possible that not every person on the Patient Services manage e-mail list (i.e. population) were leaders or had role responsibilities that met the inclusion criteria thus the 339 a reasonable approximation rather than an exact number.

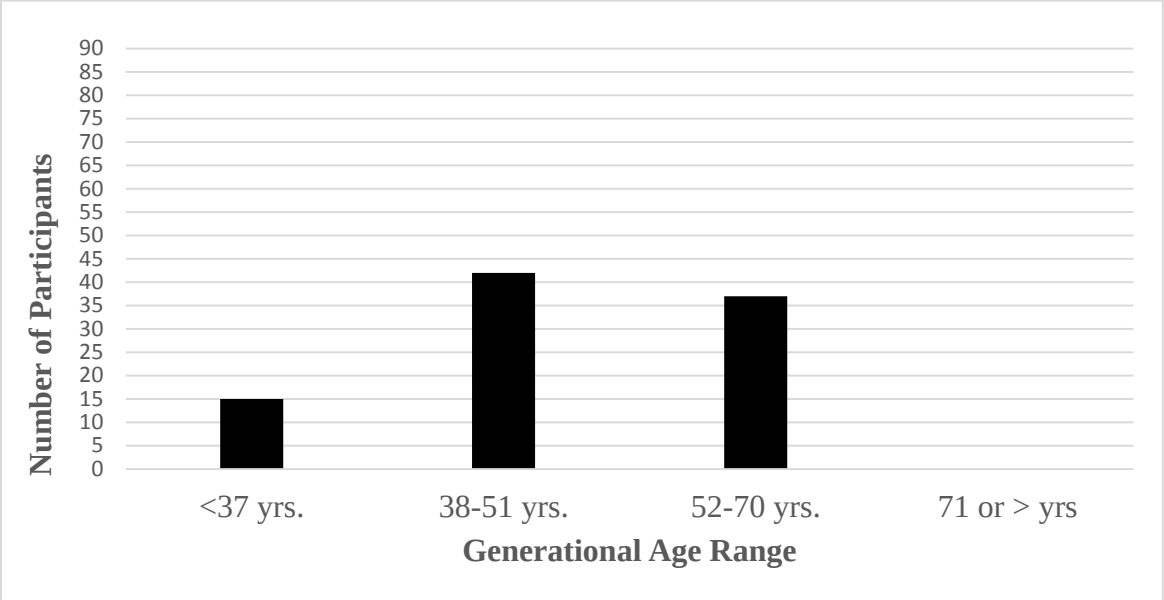

Figure 1. Participant characteristics by age.

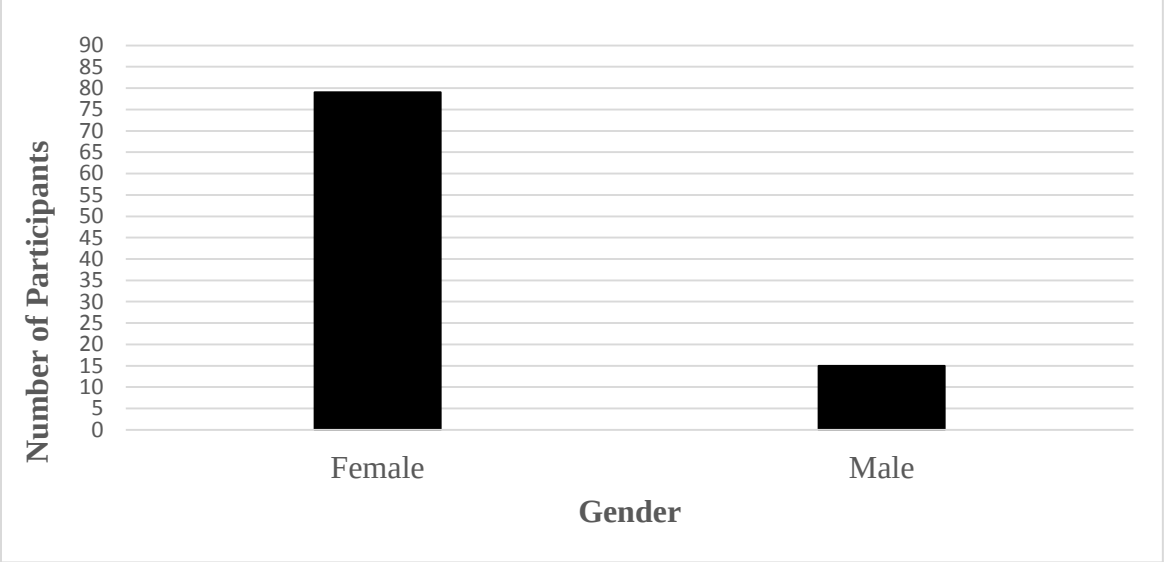

Figure 2. Participant characteristics by gender.

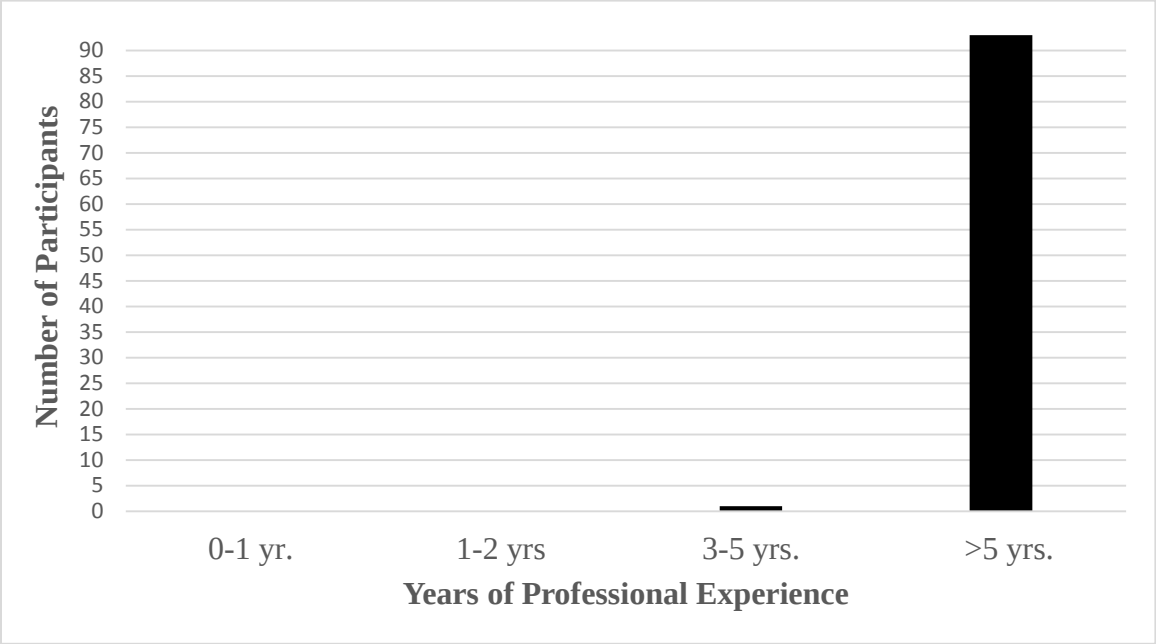

Figure 3. Participants characteristics by years of professional experience.

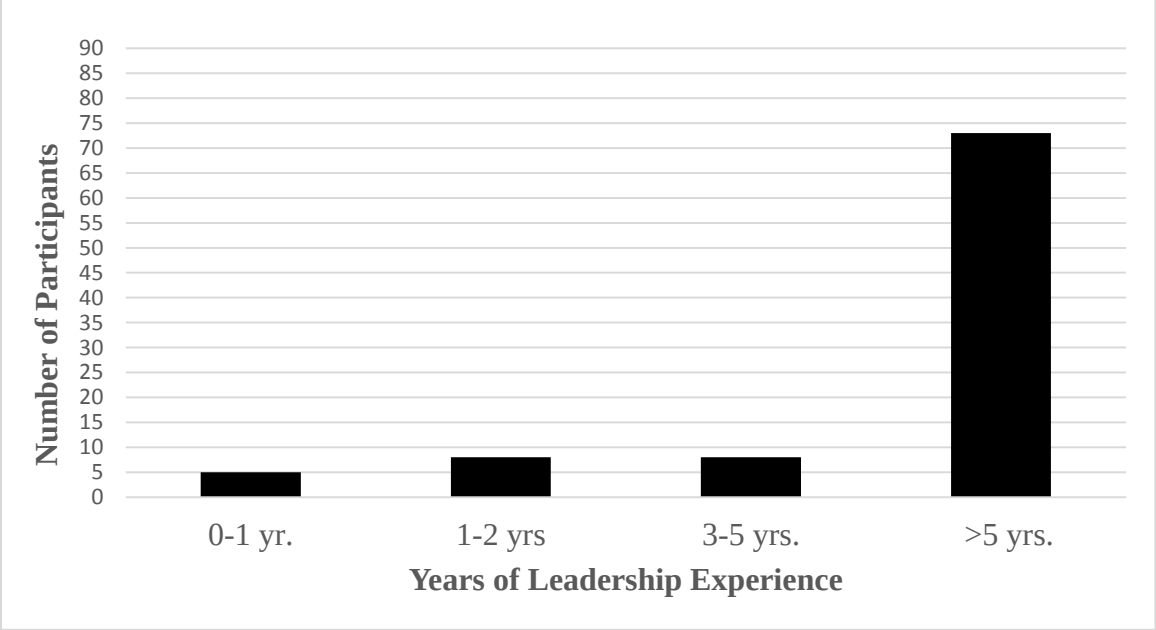

Figure 4. Participant characteristics by years of leadership.

With Spearman's rho and Kendall's tau parametric coefficients, a perfect correlation of +1.00 or -1.00 is similarly possible as could be found with Pearson's *r* statistic (Polit & Beck, 2012). Spearman's rho and Kendall's tau correlation coefficients were conducted to determine if statistically significant relations among independent to independent (i.e., self-efficacy, psychological empowerment, personal resilience, leadership style) and independent to independent (i.e. organizational resilience) variables would be supported.

Table 2

Summary of Spearman Rho Intercorrelations for Self-Efficacy, Psychological Empowerment, Personal Resilience, and Leadership Style as Associated with Organizational Resilience

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. LEQ	-	.50**	.53**	.48**	.60**	.51**	.42**	.51**	.48**	.04	-.27**	-.19	.48**
2. EMP	.50**	-	.50**	.38**	.31**	.44**	.27**	.28**	.26*	.11	-.08	-.17	.40**
3. CD RISC	.53**	.50**	-	.50**	.55**	.68**	.46**	.50**	.65**	.09	-.16	-.300**	.48**
4. IA	.48**	.38**	.50**	-	.57**	.59**	.47**	.58**	.56**	.17	-.17	-.23*	.37**
5. IB	.60**	.31**	.55**	.57**	-	.61**	.60**	.63**	.60**	.16	-.21*	-.04	.42**
6. IM	.51**	.44**	.68**	.59**	.61**	-	.41**	.51**	.60**	.05	-.20	-.20	.39**
7. IS	.42**	.27**	.46**	.46**	.60**	.41**	-	.54**	.53**	.05	-.13	-.02	.52**
8. IC	.51**	.28**	.50**	.58**	.63**	.51**	.54**	-	.61**	-.03	-.12	-.15	.38**
9. CR	.48**	.26*	.65**	.56**	.60**	.60**	.53**	.61**	-	.15	-.22*	-.24*	.39**
10. MBEA	.04	.11	.09	.17	.16	.05	.05	-.03	.15	-	.06	-.06	.44
11. MBEP	-.27**	-.08	-.16	-.18	-.21*	-.20	-.13	-.12	-.22*	.06	-	.44**	-.15
12. LF	-.19	-.17	-.30**	-.23*	-.04	-.20	-.02	-.15	-.24*	-.06	.44**	-	-.18
13. Org Resil	.48**	.40**	.48**	.37**	.42**	.39**	.52**	.38**	.39**	.08	-.15	-.18	-

p < .05, ***p* < .01

Table 3

Summary of Kendall Tau Intercorrelations for Self-Efficacy, Psychological Empowerment, Personal Resilience, and Leadership Style as Associated with Organizational Resilience

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. LEQ	-	.35**	.38**	.36**	.44**	.38**	.31**	.38**	.35**	.03	-.19**	-.13	.46**
2. EMP	.35**	-	.35**	.28**	.22**	.32**	.20**	.20**	.19*	.08	-.06	-.13	.37**
3. CD RISC	.38**	.35**	-	.37**	.41**	.54**	.34**	.38**	.48**	.06	-.11	-.23**	.47**
4. IA	.36**	.28**	.37**	-	.44**	.47**	.36**	.45**	.44**	.12	-.13	-.17*	.41**
5. IB	.44**	.22**	.41**	.44**	-	.49**	.47**	.50**	.47**	.11	-.15	-.03	.42**
6. IM	.38**	.32**	.54**	.47**	.49**	-	.33**	.41**	.46**	.04	-.14	-.15	.40**
7. IS	.31**	.20**	.34**	.36*	.47**	.33**	-	.42**	.42**	.03	-.10	-.02	.43**
8. IC	.38**	.23**	.38**	.45**	.50**	.41**	.42**	-	.48**	-.01	-.09	-.11	.39**
9. CR	.35**	.19*	.48**	.44**	.47**	.46**	.42**	.48**	-	.11	-.16	-.18*	.38**
10. MBEA	.03	.08	.06	.12	.11	.04	.03	-.01	.11	-	.04	-.04	.06
11. MBE.P	-.19**	-.06	-.11	-.13	-.15	-.14	-.10	-.09	-.16	.04	-	.34**	-.24**
12. LF	-.13	-.13	-.23**	-.17*	-.03	-.15	-.02	-.11	-.18*	-.04	.34**	-	-.26**
13. Org Resil	.46**	.37**	.47**	.41**	.42**	.40**	.43**	.39**	.38**	.06	-.24**	-.26**	-

*$p < .05$, **$p < .01$

Self-efficacy had statistically significant positive associations with psychological empowerment (r_s .05, τ .35, p = .00), personal resilience (r_s .τ .38, p = .00), all aspects of transformational leadership- idealized attributes (r_s .48, τ .36, p = .00), idealized behaviors (r_s .60, τ .44, p = .00), inspirational motivation (r_s .51, τ .38, p = .00), intellectual stimulation (r_s .42, τ .31, p = .00), individualized consideration (r_s .51, τ .38, p = .00), the contingent reward aspect of transactional leadership (r_s .48, τ .35, p = .00), and organizational resilience (r_s .49m τ .46, p = .00). There was a statistically significant negative relationship between self-efficacy and management by exception passive (r_s 1.27, τ -.19, p = .00). In addition to self-efficacy, psychological empowerment had a statistically significant positive associations with personal resilience (r_s .50, τ .35, p = .00), all aspects of transformational leadership- idealized attributes (r_s .38, τ .28, p = .00), idealized behaviors (r_s .31, τ .22, p = .00), inspirational motivation (r_s .44, τ .32, p = .00), intellectual stimulation (r_s .27, τ .20, p = .00), individualized consideration (r_s .28, τ .20, p = .00), the contingent reward aspect of transactional leadership (r_s .26, τ .19, p = .02), and organizational resilience (r_s .48, τ .37, p = .00). Personal resilience as previously stated was associated with self-efficacy and psychological empowerment as well as the aspects of transformational leadership idealized attributes (r_s .50, τ .37, p = .00), idealized behaviors (r_s .55, τ .41, p = .00), inspirational motivation (r_s .68, τ .54, p = .00), intellectual stimulation (r_s .46, τ .34, p = .00), individualized consideration (r_s .51, τ .38, p = .00), the contingent reward aspect of transactional leadership (r_s .65, τ .48, p = .00), and organizational resilience (r_s .48, τ .47, p = .00). Personal resilience had a statistically significant negative association with passive avoidant laisse-faire leadership style (r_s -.30,

τ .-.23, p = .00). Transformational aspects of leadership style had statistically significant positive associations among idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized consideration (p = .00) as well as the transactional aspect of contingent reward (p = .00) and organizational resilience (p = .00). Idealized attributes had a statistically significant negative association with passive avoidant laisse-faire style (r_s -.23, τ -.17, p = .03) as did contingent reward (r_s -.24, p = .02, τ -.18, p = .03). Management by exception passive had a statistically significant positive association with laisse-faire style (r_s .44, τ .34, p = .00). Organizational resilience had statistically significant negative associations with management by exception passive (τ -.24, p = .01) and laisse-faire style (τ -.26, p = .01). All reported correlation coefficients had confidence intervals that excluded zero.

Cronbach alphas were performed in SPSS to evaluate the reliability of the scale within the population in terms of the construct being measured. All completed scales were used to determine alphas. N = 105 for the 22-item Leadership Self-Efficacy instrument α .92, *N = 111* for the 12-item Psychological Empowerment instrument α .91, N =117 for the 25-item CD RISC personal resilience instrument α .89, N = 111 for the Multifactorial Leadership Questionnaire α .90 for the instrument in its entire 45-item instrument- α .64 for the 4-item idealized attributes subscale, α .77 for the 4-item idealized behaviors subscale, α .81 for the 4-item inspirational motivation subscale, α .72 for the 4-item intellectual stimulation subscale, α .67 for the 4-item individualized consideration subscale, α .62 for the 4-item contingent reward subscale, α .67 for the 4-item management by exception active subscale, α .62 for the 4-item management by

exception passive subscale, and α .38 for the 4-item laisse-faire 2-item subscale, and *N* = 100 for the 20-item Organizational instrument α .92.

Multinomial regression analysis was performed with bootstrapping at 1000 replications. To test for multicollinearity all variables were entered SPSS to determine variable tolerance and VIF using the linear regression analysis (Field, 2014). All had tolerance values greater than 0.1 with VIF values less than 10 with individual consideration, contingent reward, and management by exception active and passive, and laisse faire styles with condition indexes 15 or above variance proportions did not approximate 90%. Eigenvalue for inspirational motivation, intellectual stimulation, and individual consideration were .095, .084, and .070 respectively. It was postulated that self-efficacy, psychological empowerment, and personal resilience may have multicollinearity problems therefore entered as a group into diagnostics with all condition indices exceeding a value of 15 and an 82% portion of variance on the psychological empower instrument affiliated with self-efficacy. All of these stated values are indicative of multicollinearity therefore only personal resilience and idealized influence were entered into the model. Via multinomial regression model personal resilience and idealized attributes were found to have a statistically significant negative association with organizational resilience. These findings were unexpected not logically explained in the presence of existing resilience metatheory.

Table 4

Summary of Multinomial Regression Analysis for Variables Predicting Organizational Resilience Among Leaders Whose Role Includes Direct Supervision of Licensed Health Care Providers (N = 94)

		95% CI for Odds Ratio		
Predictor of Organizational Score of 4 or greater	*b (SE)*	*Lower*	*Odds Ratio*	*Upper*
Intercept	10.25 (2.65)			
CD-RISC Personal Resilience	-.110 (.032)**	.84	.90	.95
MLQ Transformation- Idealized Attributes	-.023 (.010)*	.96`	.98	.995

Note. R^2 = .42 (Cox & Snell), .52 (Nagelkerke). Model $x^2(2) = 50.70$, $p < .001$. *$p < .05$, **$p < .01$, ***$p < .001$

Data collection and analyses were conducted to examine the possibility of statistically significant relationships between the independent variables and the dependent variable among frontline health care leaders in an academic setting via self-reported responses to valid and reliable questionnaires entered in to a secure electronic data base. The null hypothesis that there would not be any statistically significant relationships among self-efficacy, psychological empowerment, personal resilience, leadership style and organizational resilience was rejected. The alternative hypothesis that stated that statistically significant relationship among self-efficacy, psychological empowerment, personal resilience leadership style, and organizational resilience would exist was accepted. The majority of Spearman's rho and Kendall's tau coefficients were statistically significant at the $p < .01$ in this sufficiently powered population that decreased the chance of Type I or Type II errors. Statistically significant negative predictors were found for personal resilience and idealized leadership attributes

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of the study was to evaluate whether or not self-efficacy, psychological empowerment, personal resilience, and leadership style were associated with or predictive of organizational resilience among health care leaders in an academic medical center. Statistically significant positive associations were found among self-efficacy, psychological empowerment, personal resilience, and organizational resilience. Statistically significant negative associations were found between self-efficacy, idealized behaviors, organizational resilience, and management by exception passive and personal resilience, idealized attributes, organizational resilience, and laisse-faire passive avoidant styles. Positive statistical significance was found between all active styles of leadership (i.e. transformational, transactional contingent reward styles) and organizational resilience as compared to lack of association or statistically significant negative associations with passive styles which was consistent with Bass and Avolio's (2004) original findings. Intellectual stimulation had the strongest association to organizational resilience, closely followed by personal resilience, and self-efficacy. Dunn, Iglewicz, and Moutier (2008) concluded that while stress, internal conflict, and time and energy demands may lead to burnout in medical students, psychosocial support, social activities, mentorship, and intellectual stimulation could bolster coping reserves fostered wellbeing and coping resilience.

Interpretation of Findings

Based on the literature, a member's feelings of self-efficacy are reinforced and personal resilience strengthened by a transformational leadership style that provides

psychosocial support and intellectually stimulates personal and professional growth (Hannah et al., 2008). Additionally, leadership intellectual stimulation, idealized influence, inspirational motivation, and individualized consideration were reported to promote positive emotions that can enhance member resilience (Sutcliffe & Vogus, 2003). Leaders who provided intellectual stimulation and individualized consideration added to members' available coping reserves to draw upon and apply when faced with complex or challenging situations (Kaplan, Corina, Ruark, LaPort, & Nicolaides, 2014).

Somers, Howell, and Hadley (2015) found that positive emotions had a statistically significant positive association with individual resilience ($\gamma = .35$, $p < .001$) and that transformational leadership was positively related to positive affect ($\gamma = .33$, $p < .001$) during crisis. Satici (2016) and Goodman, Disabato, Kashdan, and Machell (in press) concluded that hope was a significant mediator (bootstrap estimate = 0.25, 95%CI = 0.13, 0.40) and (*Std Coef* = .045, t =2.34, $p < .05$) respectively between resilience and wellbeing. Hope, similar to self-efficacy, corroborates the belief that action to manage stressors will play a role in outcome achievement. In a study of Canadian teachers (Boudrias et al., 2014), personal resources (.825) and social-organizational resources (.0.94) akin to perceived psychological empowerment had a predictive effect on personal health and wellbeing at work, although specific predictors related to organizational resilience were not found in the literature.

From a theoretical perspective, measurement of constructs via instruments developed by content experts added to face and content validity. Substantial reliability was found for instruments used in this study population. Cronbach alphas were similar to

or exceeded those found in other studies for the Leadership Self-Efficacy Questionnaire (Hannah et al., 2012), the Psychological Empowerment Scale (Kramer et al., 1999; Spreitzer, 1995), the Connor-Davidson Resilience Scale (Connor & Davidson, 2015; Gabriel et al, 2011; Laff, 2008, Sen et al., 2010; Sood et al., 2014). Reported Cronbach alphas for the Multifactorial Leadership Questionnaire in the United States for self-rated responses (Bass & Avolio, 2004) as compared to the study population were (.70, .64) for idealized attributes, idealized behaviors (.64, .77), intellectual stimulation (.76, .81), individualized consideration (.62, .67), contingent reward (.60, .62), management by exception active (.75, .67), management by exception passive (.60), and laisse-faire (.60, .38), and lower for contingent reward (.64, .62) and laisse-faire (.60, .38) respectively. Field (2014) noted that for psychological constructs alpha at .7 or below can be acceptable due to the lack of construct uniformity.

It is possible that self-efficacious individuals with perceived psychological empowerment and a propensity toward certain leadership style aspects could be drawn to organizations that are already resilient. Leaders with a transformational style may manifest those behaviors as directive, participative, authoritarian, or democratic that could modify or confound style effects (Bass, 1999). The study population focused on frontline managers; therefore, the correlational and predictive effects of mid or executive level of leaders are not known. The factors positively affecting organizational resilience may be multifactorial, influenced by an array of attributes and behaviors or encompassing factors in addition to leadership attributes and behaviors. It cannot be known if the relationships were additionally influenced by contextual variables such as external forces

of change that demand organizational resilience regardless of frontline collective leadership behaviors. It is also conceivable that leadership attributes and behaviors act as modifiers for health care providers' personal resilience that may predict organizational resilience.

The predictor variables were comprised of ordinal data, but the available range of scores for organizational resilience did not support the possibility of normal distribution, which necessitated grouping scores into categorical data. Statistical testing may have yielded more detailed results if the data "buckets" were smaller or an instrument allowing for a normal distribution of participant scores was used. Statistically significant negative findings from the multinomial regression model could be attributed to self-reported data indicative of leaders who hold a higher perception of personal resilience and idealized attributes in contrast to their perception of how their actions contribute to the resilience of the organization. Questions posed on the CD RISC personal resilience and the Multifactorial Leadership Questionnaires address individual responses and actions, whereas approximately a third of the questions on the Organizational Resilience instrument begin from the premise of how the leaders engaged in teamwork and inter-collegial collaboration, while another third specifically addressed leadership actions under chaotic circumstances, hence measuring resilience from a different perspective. It is not known how participants interpreted the term *chaotic*. Rather than relating to a complex environment, if a leader's perception was an out-of-control environment, this was reflective of less effective leadership. Leaders may perceive themselves as transformational in terms of leading change within their perceived sphere of influence

that would not necessarily include working collaboratively with other leaders. Subsequently, leaders supervising licensed health care provides providing direct patient care may perceive that they are contributing a high level of leadership effort that is not directly connected or impactful at the organizational level. It is also possible that leaders do not equate their individual leadership efforts as effectively effecting overall organizational outcomes.

Limitations

The nature of the available scores on the Organizational Resilience Instrument could only range from 20 to 100 and were therefore not normal or amenable to other forms of statistical regression. Categorizing scores into five ranges may have inhibited my ability to determine predictive effects, as did an unpowered final sample size. The length of time and number of surveys required by the study design as well as the clarity of instrument directions could have had an effect on participant scores or be a plausible explanation as to why some participants started but did not complete instruments. The true anonymity of participants necessitated that those on the e-mail group lists received each staggered request for participation, which may have created uncertainty as to whether the request was for additional participants or the completion of different instruments or allowed participants to repeat instrument completion.

The level of participant response could have been limited by historical factors such as the number of surveys that participants had been asked to respond to around and throughout the recruitment period, resultant in “survey fatigue.” The timing of the recruitment period took place at the end of a fiscal year at the same time when leaders

were finalizing budget submissions inclusive of budget reductions, completing employee performance evaluations, and managing staffing amidst seasonal paid time off. These factors may have interfered with eligible participant decisions as to opt into the study or effected participant ability to complete instruments within the requested guidelines. It is also possible that participant personal mood, motivation, and willingness to participate may have influenced participation.

No clinical workforce data specific to academic health care organizations were found. The Ohio Board of Nursing (2014), the state of the study setting, reported rates comparable to national rates for gender: 92%, 91% female and 8%, 9% male, respectively. However, the state differed in reported age ranges between the ages of 18 and 55 (71%, 80%) and those age 56 or older (29%, 20%) respectively. The study only offered nominal choices for gender so that the demographic could be compared to reported data that could have been perceived by participants as lacking in inclusivity. Reports or literature were not found related to demographics for other licensed professionals such as occupational therapists, physical therapists, or social work. Additionally requested demographics did not include the leader's identification with a specific health care discipline so as not to dissuade participants from disciplines with fewer numbers of leaders (e.g., child life and integrative health, occupational health, physical therapy, respiratory therapy). In 2014, the American Hospital Association reported that millennials comprised approximately 45% of the health care workforce, 20% were generation X in middle manager roles, 30% baby boomers in leadership roles, and less than 10% traditionalists whose attitudes and communication styles can affect

organizational performance and culture. Skewed population data did not warrant the ability to compare age and gender findings noted by Bass and Avolio (2004) related to transformational leadership style and Mallak and Yildiz (in press) surrounding organizational resilience.

Recommendations for Future Research

Recommendations for future research include replication of the study on a broader scale within additional academic settings in order to determine if findings can be generalized beyond the stated population. Studies that explore a potential impact of variable associations (i.e., self-efficacy, psychological empowerment, personal resilience) or subcomponents of transformations leadership (i.e., idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, individualized consideration) in the absence of multicollinearity effects is needed to examine the role of each variable on organizational resilience as well as effect size. Multisite studies or a national population of health care leaders would enhance the ability to generalize findings. Replication of this study in other academic health care leadership populations, community health care leadership populations, or with varying levels of leadership within these populations may further inform the relative importance of variables. Replication of this study design in larger populations or in random samples could lend support to the applicability and generalizability of study findings. Replication of the study using a different organizational level of leadership or comparing the effect of different levels of leadership on organizational resilience would be informative. Staggering instrument completion requests over a defined length of time may enhance completion rates over

shorter bursts of time. Other forms of potential self-reported data such as unstructured or semi-structured interviews or focus groups to gather relevant data could be used. In a larger population, demographics that include professional discipline of practice could provide an opportunity to evaluate as a confounding variable.

From a practice perspective, future studies on gender and leadership styles, collective leadership style on organizational commitment, and performance in large organizations need to be conducted (Singh, 2015). It would be valuable to have evidence as to how the independent variables might be related to one another (e.g., mediating, moderator). It would also be of interest to look at how leadership locus of control or attributional style might be associated with organizational resilience. Transformational leadership theory addressed leader-follower relationships. However, future research that extends into how each sub-construct of transformational leadership might affect organizational processes that enhance an organization's ability to survive and adapt would be advantageous. It would also be constructive to have evidence as to how the subcomponents of transformational leadership might mediate or modify one another. Future researchers should focus on the organizational strengths needed to traverse unpredictable and turbulent times, the impact of resilient processes on organizations, and the variables that translate into organizational resiliency.

Implications for Resilience Theory, Leadership Practice and Social Change

To advance leadership theory beyond leader-member attributional associations, future research should address construct associations that are conceptually conceived from interdisciplinary theories or metatheory to yield scientific knowledge that

practically advances the affiliation of leadership attributes and behavior within meso and macro aspects of organizational systems. Based on the works of Barnard (1991), Garmezy (1991), Masten (1998, 2011), Rutter (1993, 2012), and Werner (1997), whether or not an individual possesses resilience is solidified in childhood with little chance of modification during adulthood. Richard's (2002) work discussed the process of using protective factors to adapt. In 2016 Richardson added the word applied to the metatheory of resilience and resiliency which postulated that resilient qualities can progress if one is open to inquiry, experiences learning, and achieves self-mastery as a result of the stressor or challenge. Thus, organizations need to deliberately select and cultivate those leadership attributes and behaviors that actively contribute to organizational resilience.

Implications for Leadership Practice

On an individual level a leader's personal traits, personality, and coping style effect one's self-efficacy and ability to be resilient in the face of situational stressors. Within an organization leadership role autonomy and availability of sufficient resources and support provide the context for perceived psychological empowerment and enable the leader to exhibit behaviors that as a composite are representative of leadership style. Collectively leadership and member behaviors make up organizational culture. It is important to know as organizations onboard and develop leaders with attributes and behaviors that best fit the desired culture. Academic health care organizations with collective leadership resiliency have a collective repository of knowledge, expertise, and experience to promptly respond to a rapid pace of change.

Leaders who exhibit idealized influence attributes demonstrate a willingness to apply general ethical principles to move forward with decision making in the absence of complete information (Bass & Riggio, 2010). Resilient leaders are have an accurate view of reality with an innate ability to devise solutions and adapt to substantial change therefore organizations should recruit for and onboard leaders who are in possession of high levels of resilience via screening or behavioral interviewing processes (Harvey & Martinko, 2009). Use of diagnostic tools could be beneficial in the identification of leadership potential based on key behaviors related to self-efficacy and organizational resilience- remain calm in during stressful situations, be inspirational under difficult circumstances, put forth sound solutions to stated problems, and learn from complex situations.

The leadership paradigm in complex academic health care systems has shifted away from managing people toward influencing key cognitive and emotional behaviors, processes, and positive trusting relationships that make up the socioecological aspects of the organizational culture. Although Wongyanon, Wijaya, Mardiyono, and Soeaidy (2015) concluded that transformational, transactional, or laisse faire style could positively affect organizational performance among chief executives in Thailand, Wei, Kwan, and Kwong (2016) supported distinct differences between active constructive leadership styles (i.e. transformational, contingent reward, active management by exception) and passive corrective styles (i.e. passive management by exception, laisse faire) and noted that transformational and transactional leadership were both effective at lower levels of leadership. Leaders with active management by exception have a more neutral than

proactive style lacking the necessary confidence to be proactive that results the expectation that workers will go about business as usual whereas a passive management by exception style is reactive interceding only when issues can no longer be ignored, and laisse faire style essentially is an absence of leadership that run counter intuitive to the motivational drive and ability to impact a course of action that is inherent in self-efficacious leaders (Z. Khan, Nawaz, & I. Khan, 2016). Transformational leadership behaviors can be taught, mentored, and reinforced to enhance leaders' knowledge, skills so that leaders can provide for idealized influence, inspirational motivation, intellectual stimulation, and individual considerations among others to create a positive force for traversing change.

In the age of corporate responsibility leaders must also be able to extend leadership behaviors outward into the community. Transformational leadership behaviors are needed engage, motivate, and empower action at the community level. Leaders must possess personal traits, personality, and coping styles bolstered by self-efficacy and within the context of support systems that psychologically empower leaders to collectively permit organizations and communities to confront and effectively deal with the stressors of internal and external forces of change and work to mitigate social determinants of health within the community. Organizations can invest in human capital and cultivate accountability and citizenship inside and outside of the organization via principles and practices that localize decision making power, formal and informal social integration, fostering relational aspects of leadership that create trust and interdependence, open communication and collaboration, knowledge dissemination and

sharing (C. Lengnick-Hall, Beck, M. Lengnick-Hall, 2011). While transactional leadership behaviors effect short term motivation of members transformational behaviors that seek to influence and stimulate attitudes may result in longer term organizational performance.

Mintzberg (1990) professed that the manager's role afforded the formal status but leadership involves personal insight into how one uses that power and influence to interact (i.e. figurehead, leader, liaison), disperse information (i.e. monitor, disseminator, spokesperson), and engage in decision making (i.e. change agent, disturbance handler, resource allocator, negotiator). Conversely Kotter (2001) and Goleman (1998) discussed management and leadership qualities along a continuum thus people possessing varying degrees of each and noted that strong management skills are needed to avoid chaos and manage complexity particularly in large organizations related problem solving by means of setting a direction and aligning the right people with the right tasks whereas strong leadership embodies the self-awareness, authenticity, motivation, and social skills essential for change. Managers at the frontline find themselves caught up in the daily fray and need to engage in two way feedback in order to contribute to problem solving from the perspective of the organization. Operating from a management approach managers will find that they are enmeshed in first order change aimed at making improvements through current processes. It is only through second order change that leadership attributes and behaviors are focused outward toward others that can create new structures and adaptive processes needed for organizational and community viability and sustainability. To be effective leadership needs a clear understanding of organizational

roles, responsibilities, goals and own accountability for achieving those goals that in complex environments necessitate that frontline leadership have the flexibility to make decisions and shift leadership responsibilities as the work requires in order to practice proficiently at the point of service. On boarding of leadership must include attitudes in addition to knowledge and skills if the organizations effectiveness is to be improved (Beer, Finnstrom, & Scharder, 2016).

Leaders can enhance members organizational commitment via motivation (e.g. feedback, incentives), empowerment (e.g. information sharing, participative decision making), and skill enhancing (e.g. recruitment, training) practices when consistently applied over time can create a common mental model that will benefit the organization (Gardner, Wright, & Moynihan, 2011).

Implications for Social Change

Frontline leaders need to able to visualize different perspectives, engage the perspectives of others, exercise their voice as appropriate, and when called for deviate from standard procedures (Ward et al., 2015). It is the role of leadership to stimulate, mentor, coach, guide, and providers through sense making of problems and dilemmas to achieve positive change from which the system can best transform, adapt, and fulfill the dual role of health care service delivery and engaging in the creation of community health. Flexibility in the presence of uncertainty requires leadership synergy among frontline leaders in possession the tangible details regarding potentially emergent issues who are empowered to intervene complemented by higher levels of leadership who can add to sense making and organizing (Barton, Sutcliffe, Vogus, & DeWitt, 2015). Such a

business model can be used to generate social change in collaboration with community leaders or multisector coalitions that would benefit social, environmental, and economic determinants of health. Academic health care organizations that work to increase to primary, subspecialty, and mental health services access and link with communities to attain healthy food access, safe housing and child care, positive parenting resources, safe community environments, and adequate public health systems play a positive role in the achievement of healthy children, secure families, and strong communities that are foundational for childhood resilience (American Academy of Pediatrics, 2016).

Conclusion

Resilient transformational leaders motivate and encourage resilient behaviors in others. The role of upper levels of leadership is to provide mentoring, coaching, direction, and support as well as coordinate resolutions when complex system issues across units, departments, or divisions arise (Scoville, Little, Rakover, Luther, & Mate, 2016). The ambiguity and varying degrees of stability faced by health care leaders and providers on a daily basis require constant leader-provider collaboration and cooperation. Waltuck (2012) stressed that in complex systems it is on the threshold of chaos where interactive effectiveness, efficiency, and a new level of energy can occur. Traversing change has become a way of life. It is through the many resilient leaders-to-provider connections that an organization can come to know resilience. Resilient organizations are born out of resilient leaders who possess transformation leadership attributes, model transformational behaviors, expect professional growth among members, and provide the requisite resources to achieve it.

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