ORGANIZATIONAL COGNITION AS INTERVENED BY ORGANIZATIONAL SUPPORT AND ENGAGEMENT ON MEDICAL CODERS’ EXHIBITION OF ORGANIZATIONAL CITIZENSHIP BEHAVIORS

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ORGANIZATIONAL COGNITION AS INTERVENED BY ORGANIZATIONAL
SUPPORT AND ENGAGEMENT ON MEDICAL CODERS’ EXHIBITION OF
ORGANIZATIONAL CITIZENSHIP BEHAVIORS

by

DAVID W. CONLEY

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Human Resource Development

Kim Nimon, Ph.D., Committee Chair

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The University of Texas at Tyler
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The University of Texas at Tyler
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Has been approved for the dissertation requirement on
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Abstract

ORGANIZATIONAL COGNITION AS INTERVENED BY ORGANIZATIONAL SUPPORT AND ENGAGEMENT ON MEDICAL CODERS’ EXHIBITION OF ORGANIZATIONAL CITIZENSHIP BEHAVIORS

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Dissertation Chair: Kim Nimon, Ph.D.

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Informed by the social cognitive theory and social exchange theory, this study examined medical coders’ evaluation of organizational cognition in the presence or perception of organizational support and organization engagement and their resultant behavior. The reciprocal exchanges present in the employee and organization relationship are identified, as positive valuations facilitate mutually beneficial outcomes. Specifically, the examination of cognitions, implicit employee judgments, and behaviors provide a framework to examine the state of engagement and its related outcomes. The use of perceived organizational support and organization engagement as intervening variables provided insight into the complex relationships between medical coding employees’ evaluation of organizational cognition and their exhibition of organizational citizenship behaviors in the context of U.S. healthcare. The a priori non-experiment survey design quantitatively examined the employee and organization exchanges that are implicit in the workplace and supported by theory and empirical research. This study
found a statistically and practically significant effect for the higher order factor organizational cognition as intervened by perceived organizational support and organization engagement on the outcome of organizational citizenship behavior. The establishment of a multi-step intervening model highlighted the importance of the exchanges that are ongoing in an employee and organization relationship. In addition, examining perceived organizational support as a serial intervening variable with organization engagement provided a conceptual bridge beyond viewing the construct as just a resource. This study theoretically implies that perceived organizational support and engagement are inextricably tied, as the employee and organization relationship is facilitated by ongoing exchanges. Furthermore, engagement research modeling organizationally centric factors acknowledges the psychological valuations that employees undergo that influence behavior. Lastly, this study offers practical insight for promoting a supportive workplace environment that is distributively and procedurally just, offers growth opportunities, and has identified performance expectations. Medical coding employees who feel supported by the organization are more likely to be engaged and go above and beyond their assigned duties in the interest of themselves and the organization.

*Keywords*: organizational cognition; organizational support; engagement; organizational citizenship behaviors
Chapter 1 – Introduction

Background to the Problem

Employee engagement is an area of focus for human resource development (HRD) academicians and practitioners, as organizations in the United States are saddled with a disengaged workforce that has costs in excess of $450 billion dollars annually (Corbin, 2017; Sorenson & Garman, 2013). Scholars and those in the field have seen numerous engagement definitions, conceptualizations, and operationalizations that have contributed to the proliferation of what it means to be engaged (Harter, Schmidt, & Hayes, 2002; Maslach, Schaufeli, & Leiter, 2001; Saks, 2006; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002; Shuck, Osam, Zigarmi, & Nimon, 2017; Shuck & Wollard, 2010; Zigarmi, Nimon, Houson, Witt, & Diehl, 2009). Kahn (1990) coined the term “engagement” in the academic literature as the “harnessing of organization member’s selves to their work roles,” where individuals “express themselves physically, cognitively, and emotionally” (p. 694; Bakker, 2017). The benefits of employee engagement may be seen from the employee and organizational perspective with improved satisfaction, job performance, organizational commitment, organizational citizenship behavior (Hakanen, Bakker, & Schaufeli, 2006; Saks, 2006), safety, productivity, and reduced turnover (Harter et al., 2002).

Inconsistencies in application and a lack of unified language have been problematic and have contributed to the confounding of the construct (Shuck & Wollard, 2010). Conceptual overlap with other constructs have scholars questioning whether
engagement commits the jangle fallacy, which essentially places the same wine of existing measures and constructs into a new bottle (Macey & Schneider, 2008; Saks, 2006; Shuck, Ghosh, Zigarmi, & Nimon, 2012). Specifically, job satisfaction, job involvement, and organizational commitment have theoretically contributed to numerous models, application, and unique variance associated with employee engagement (Harter et al., 2002; Macey & Schneider, 2008; Schaufeli et al., 2002; Shuck et al., 2012; Shuck, Nimon, & Zigarmi, 2016). Nimon, Shuck, and Zigarmi (2016) highlighted certain measures of employee engagement and job satisfaction, and their high correlations may be a result of semantic similarity rather than perceptions of separate constructs. In addition to shared conceptual space with existing constructs, four distinct employee engagement frameworks have emerged to include the need-satisfying framework (Kahn, 1990), the burnout-antithesis framework (Maslach et al., 2001), the satisfaction-engagement framework (Harter et al., 2002), and the multidimensional framework (Saks, 2006; Shuck, 2011). Existing frameworks of engagement share commonality in their purpose, but are at odds as to their operationalization and future development of the construct (Zigarmi et al., 2009).

The theoretical and practical challenges associated with the engagement construct are prevalent across industries, and healthcare is no exception. Engaged employees in healthcare have been associated with several promising outcomes, such as the quality of patient care, patient safety (Bulpapuram, Wundavalli, Avula, & Reddy, 2015; Clark, 2018; Lowe, 2012; Shaller, 2007; Thorp et al., 2012), patient satisfaction (Caldwell, 2011; Lowe, 2012; Scotti, Harmon, Behson, & Messina, 2007; Thomas, 2018); and improved mortality measures (Blizzard, 2005; Kruse, 2015). Healthcare organizations
that involve the patient in their treatment by facilitating a “patient-centered” approach have improved health outcomes that are reflective of the employees implementing the approach (Bulkapuram et al., 2015; Mason, Sox, & Whitlock, 2019). This is relatable to the exchange contributions found within the employee and organization relationship (Eisenberger, Rockstuhl, Shoss, Wen, & Dulebohn, 2019; Gouldner, 1960).

The importance of the clinical environment and the outcomes of patients is recognized and easily associated with the service provided by clinicians, although many underlying administrative functions are also integral in providing a successful patient experience. Medical coders are an example of this, as they convert a medical diagnosis, health procedure, or service into an alpha-numeric code that assists in the billing process (American Academy of Professional Coders [AAPC], 2018). Medical coders may also serve in a billing capacity or resultantly impact the data provided to medical billers and the insurance companies, which influences the patient’s bill for the service provided (AAPC, 2018). Secondary benefits of medical coding include the surveillance, classification, and quantification of diseases, injuries, healthcare utilization, and adverse events at the local, state, and federal levels (Centers for Disease Control and Prevention [CDC], 2015).

The patient experience is often assessed via internal and external patient satisfaction surveys (Centers for Medicare and Medicaid Services [CMS], 2018). The patient experience can be influenced prior to arrival, within the facility providing care, and upon exit, which may include discharge communication, and follow-up appointments, and it is not limited to accurate and timely billing. Healthcare organizations that value high-quality care, patient safety, and the overall experience of
the patient know the importance of employee engagement, as the relationship between a healthy workplace environment is reciprocal of patient outcomes (Lowe, 2012; Zwillinger & Huster, 2017). Employees that report being satisfied or engaged have shown a positive relationship with patient satisfaction measures and customer experiences (Lowe, 2012; Scotti et al., 2007).

Engaged employees elicit rational, emotional, and behavioral attachments to their job and organization, which benefits patients, coworkers, and the organization (Lowe, 2012). Moreover, patient outcomes and healthcare quality measures are reflective of the employees that contribute to the organizational environment. Furthermore, the need for employees to be actively engaged and to exhibit citizenship behaviors that exceed expectations is apparent when lives are dependent upon this, such as in the healthcare industry. The contributions of clinical and nonclinical medical professionals are integral in the outcomes among coworkers, the organization, and the individuals they serve.

**Statement of the Problem**

The conceptualizations, nomological challenges, and existing frameworks for employee engagement, and agreement between and among researchers and practitioners have proved difficult (Schaufeli, 2013; Shuck et al., 2017; Shuck & Wollard, 2010; Zigarmi et al., 2009). Despite these differences, the shared purpose and goal of employee engagement or its intervention in desired outcomes require operationalization (Zigarmi et al., 2009). Organizations seeking answers to identify, measure, and facilitate engagement and its outcomes are challenged by the expansive frameworks and attributed findings, and they therefore struggle with the basic questions of what, why, and how. Common ground for existing research and future applications relies upon the symbiotic relationship
and exchange between the employee and organization as accommodated by the multidimensional framework (cf. Eisenberger, Huntington, Hutchison, & Sowa, 1986; Saks, 2006; Shuck, 2011).

Researchers have called for empirical studies with robust models that explore the individual and organization relationship, the identification of psychological and environmental conditions that clarify employee engagement, and environmental workplace conditions and outcomes (Kurtessis et al., 2017; Rhoades & Eisenberger, 2002; Saks & Gruman, 2014). The reciprocal contributions of both the individual and organization, similar to a relationship, must be understood to appreciate the levels of interaction required to maximize employee engagement, the organization’s role, and desired mutual outcomes (Blau, 1964; Eisenberger et al., 1986; Saks, 2006). The positive contributions of both the individual and organization are reciprocal, are supportive of an exchange relationship, and are needed to maximize employee engagement and desired outcomes such as the exhibition of organizational citizenship behaviors (cf. Blau, 1964; Eisenberger et al., 1986; Saks, 2006).

Confusion in the healthcare sector in identifying and measuring employee engagement in terms of satisfaction or happiness has detracted from meaningful strategic integration (Kruse, 2015). Employee engagement studies in the healthcare industry have examined the relationship of health quality, safety, and mortality (Blizzard, 2005; Clark, 2018; Bulkapuram et al., 2015). Patient satisfaction measures and positive health outcomes have been linked to healthcare organizations with satisfied, healthy, and engaged employees (Lowe, 2012; Scotti et al., 2007). Studies involving medical coder engagement, however, have been limited (American Health Information Management
Association [AHIMA], 2004; Lowe, 2012; Spencer & Davies, 2012). The necessity of considering nonclinical professionals in the context of healthcare delivery is apparent, as medical coders can impact the patient experience or level of patient satisfaction by the role they perform in facilitating the data that assist in the generation of a patient bill. Healthcare organizations striving to achieve high standards of patient care, safety, satisfaction, and operational excellence require an investment in human capital, and specifically targeting engagement efforts for clinical and nonclinical personnel is essential (Kruse, 2015). Academicians and practitioners must be cognizant of parity in their description, measurement, and efforts for intervention.

The definitional, conceptual, and framework differentiations associated with employee engagement are noted, because the state or outcome of being engaged coupled with being supported by the organization lends itself to a host of individual and organizational outcomes deemed important in an exchange relationship (Eisenberger et al., 1986; Kahn, 1990; Saks, 2006; Shuck, 2011). Specifically, organizational citizenship behaviors (OCBs), when idealized as an outcome, position the employee and organization relationship as being mutually beneficial. Organizational citizenship behaviors extend business capability, initiative, and innovation when the environment is conducive to such behaviors, wherein such energies are reinvested and reciprocated (Blau, 1964; Cropanzano & Mitchell, 2005; Organ, 1997). The assessment of perceived organizational support and organization engagement as intervening variables provides a reciprocal platform in the employee and organization relationship to examine predictor and criterion variables with greater specificity (cf. Alfes, Shantz, Truss, & Soane, 2013; Rhoades & Eisenberger, 2002; Saks, 2006).
**Purpose and Significance of the Study**

Informed by the social cognitive theory (Bandura, 1986) and social exchange theory (Blau, 1964), this study examined employees who cognitively assess and value their working environment and resultantly exhibit behaviors that are mutually beneficial to the employee and organization relationship. Employees’ cognitive valuations of their workplace environment contribute to their exhibition of organizational citizenship behaviors (cf. Rich, LePine, & Crawford, 2010; Saks, 2006; Shuck et al., 2014; Zigarmi et al., 2009; Zigarmi, Nimon, Houson, Witt, & Diehl, 2012). This study utilized a multidimensional approach (Shuck, 2011) in modeling organizational cognition (predictor), using the intervening variables of perceived organizational support and organization engagement, on medical coder’s exhibition of organizational citizenship behaviors (outcome) in the context of U.S. healthcare. Examining cognitions in the context of healthcare offers a psychological glimpse into the process medical coding employees undergo in the interest of themselves and others, where their behaviors may be impacted by the strength of their relationships or valuation of organizationally centric indicators. Organizationally centric indicators for this study reference the constructs of organizational cognition, perceived organizational support, organization engagement and organizational citizenship behaviors, and employees may assign value to the presence or absence of factors they attribute to the organization.

Specifically, employees view their job and organizational environments differently (Saks, 2006), and their state of engagement is impacted by the values they place upon what they are assessing (Zigarmi et al., 2009). Modeling perceived organizational support and organization engagement as intervening variables
acknowledges factors found in the workplace that reinforce employee thoughts, judgments, and intention on behalf of the organization (cf. Eisenberger et al., 1986; Saks, 2006; Zigarmi et al., 2009). The assessment of organizational cognition using the intervening variables of perceived organizational support and organization engagement, affords the opportunity to examine the exhibition of organizational citizenship behaviors. Moreover, the modeling of perceived organizational support and organization engagement as intervening variables and in the context of social exchange answers the call for examining more robust models involving indirect effects (Kurtessis et al., 2017; Preacher & Hayes, 2008). The use of organizational cognition and organization-centric indicators as perceived and reported by study participants answers the call for examining interactive psychological and environmental resources that influence when employees become engaged (Saks & Gruman, 2014).

The examination of the selected predictor was important to this study because it is of the view that the second-order factor organizational cognition shapes employee valuations and behavioral intent toward the organization. The use of perceived organizational support and organization engagement as intervening variables in this study is to identify the indirect relationship between the selected predictor and the outcome of organizational citizenship behaviors directed toward the organization. The perception of organizational support and organization engagement relies upon the contributions present in the employee and organization relationship, and consideration of specific predictors and outcomes may facilitate employee thoughts, judgment, and intent (cf. Saks, 2006; Zigarmi et al., 2009). The 12-item organizational cognition scale (Work Cognition Inventory – Revised, WCI-R; Nimon & Zigarmi, 2015b) was used as the predictor in this
study. The 8-item Survey of Perceived Organizational Support (Eisenberger et al., 1986; Rhoades, Eisenberger, & Armeli, 2001) scale was paired with the 6-item organization engagement (Saks, 2006) scale to assess the intervening variables in this study. The final part of the study identified respondent exhibition of organizational citizenship behaviors directed toward the organization using the 4-item OCBO scale (Lee & Allen, 2002; Saks, 2006).

**Theoretical/Conceptual Underpinnings of the Study**

Two theories underpin this study, social cognitive theory (Bandura, 1986) and social exchange theory (Gouldner, 1960). The first theory, social cognitive theory (Bandura, 1986), provides a basis for the psychological and social interactions involving employee and environmental factors that influence perceptions and behavior in the workplace. Human behavior is not a unidirectional happening as a result of environmental forces or internal dispositions in sequence; the inclusion of cognitive, biological, societal, and behavioral events are interactive and bidirectional (Bandura, 1986; 2001). Social cognitive theory is supportive of the notion that behavior results from choice based upon the expectation of an outcome or reinforcement, which requires an assessment of the situation (Zigarmi et al., 2009). This study examines organizationally oriented factors that influence and are reinforced by cognitive valuations made by the employee, which impacts their behavior.

Organizational cognition represents a second-order factor of work cognition and serves as a predictor in this study, that is intervened by perceived organizational support and organization engagement, which leads to employees exhibiting organizational citizenship behaviors (cf. Eisenberger et al., 1986; Nimon & Zigarmi, 2015a; 2015b;
Nimon, Zigarmi, Houson, Witt, & Diehl, 2011; Saks, 2006; Zigarmi, Nimon, Houson, Witt, & Diehl, 2011; Zigarmi et al., 2012). Saks (2006) emphasized the use of antecedents and the distinctiveness of organization engagement in an exchange context, and this is supported by the social cognitive view that recognizes the interplay between the psychological and environmental contributions that shape behavior. The inclusion of perceived organizational support as an antecedent to engagement and as an intervening variable is a valued addition, is supported in engagement research, and shows support between the identified predictor and the outcome of organizational citizenship behaviors (Kurtessis et al., 2017; Rich et al., 2010; Saks, 2006). These relationships are examined further.

The second theory, social exchange theory (Gouldner, 1960), is complementary to the social cognitive theory by providing a basis for the study, model, and exchanges that take place between employees and organizations. Social exchange theory as posited by Gouldner (1960) invokes the tenet of reciprocity, which involves returning tangible or intangible support to those who have provided their support. Blau (1964) provided a distinction between economic and social exchanges, and this may be understood in the context of the relationship between the employee and organization. Social exchange involves relationships that develop over time and are characterized by trust, party loyalty, and mutual commitment (Cropanzano & Mitchell, 2005). In addition, reciprocal interdependence includes the response of another as a result of an interchange or transaction. This can be appreciated and understood in terms of the environment to which individuals and their organization mutually contribute. Employees cognitively value environmental working conditions because their intent to exhibit behaviors is
supported by the positive exchange relationships attributed to the organization as a whole (cf. Eisenberger et al., 1986; Zigarmi et al., 2009). Employees who perceive the organization as caring for their contributions and well-being and who exhibit organization engagement, exchange their thoughts and judgment for outcomes such as organizational citizenship behaviors (cf. Eisenberger et al., 1986; Saks, 2006).

**Research Hypotheses**

Several hypotheses were examined in this study, as individuals form perceptions in the workplace that are shaped by social cognitive and social exchange principles that highlight the importance of key individual and organizational factors (Rhoades et al., 2001; Zigarmi et al., 2009). Employees perceive and value the structural elements and goodwill found within the workplace environment. The thoughts and valuations attributed to the interaction between the contributions of the employee and organization are ongoing, and it is these valuations that influence employee behavior (Bandura, 1986). Employees are more likely to reciprocate positive organizational outcomes such as organizational citizenship behaviors when they feel valued by the organization and when their interests are represented (Kurtessis et al., 2017). In addition, employees value the job and organization differently, and their level of engagement and the related favorable outcomes are reflective of this attribution (Saks, 2006). Acknowledgement of the job and organization as different domains provides an opportunity to examine the process employees undergo when they assess key workplace factors that can be linked to their behavior.

Organizational cognition is a second-order construct comprised of the first-order constructs of distributive justice, procedural justice, growth, and performance expectation.
(Nimon & Zigarmi, 2015b). Employees value the workplace environment, which informs their intentions and behaviors (Zigarmi et al., 2009). Employees associate distributive justice, procedural justice, and variations of growth and performance expectations along with the perceptions of support they have of the organization (Kurtessis et al., 2017). In addition, organizational environments identified as being supportive have shown that employees are more likely to reciprocate their efforts on behalf of the organization (Eisenberger et al., 1986). Furthermore, studies have shown support for modeling distributive justice, procedural justice, developmental opportunities, and in-role behaviors as resources with measures of engagement (Bakker & Bal, 2010; Bakker, Schaufeli, Leiter, & Taris, 2008; Saks, 2006; Schaufeli, Taris, & Bakker, 2006). Lastly, perceived organizational support has been modeled as an antecedent to measures of engagement with the outcome of organizational citizenship behaviors (Rich et al., 2010; Saks, 2006).

Organizations and employees bear reciprocal responsibility for the psychological and environmental conditions that facilitate perceptions of organizational support, organization engagement, and desirable outcomes (cf. Bandura, 1986; Eisenberger et al., 1986; Gouldner, 1960; Saks, 2006). The maximization of perceived organizational support and organization engagement is integral to mutual outcomes, as employees and organizations contribute to the workforce environment basically in the form of inputs and outputs. The fulfillment of mutual outcomes in the employee and organizational relationship can proceed beyond mechanistic terms when the relationship is valued by all parties. The reciprocal exchange between effort and outcomes is complimentary to the interaction recognized by the employee’s internal and external environment (Bandura, 1986; Blau, 1964).
The hypotheses (see Figure 1) identified include organizational cognition, the intervening variables (perceived organizational support and organization engagement), and outcome (organizational citizenship behaviors) as follows:

**H1:** Organizational cognition has an indirect effect on organization engagement through perceived organizational support while controlling for the direct effect of organizational cognition on organization engagement.

**H2:** Organizational cognition has an indirect effect on employee exhibition of OCBs through organization engagement while controlling for the direct effect of perceived organizational support on organization engagement.

**H3:** Organizational cognition has an indirect effect on employee exhibition of OCBs through perceived organizational support then organization engagement while controlling for the direct effect from organizational cognition on organization engagement.

*Figure 1. Conceptual Model of Hypothesized Relationships*
Overview of the Design of the Study

The a priori non-experiment survey design examined the predictor variable of organizational cognition (composed of the first-order factors--distributive justice, growth, performance expectation, and procedural justice) with the intervening variables of perceived organizational support and organization engagement, and the outcome of organizational citizenship behavior. Medical coding professionals who reside and work in the United States, who are 18 years of age and older, and who work 40 hours or more during the week were studied. Demographic variables included generational cohort, gender, race, organizational level, and salary to ensure representativeness in the population studied (Lyons, Ng, & Schweitzer, 2014). Participants were recruited via email distribution from the American Health Information Management Association (AHIMA), a national organization with representation in 52 affiliated state associations across the U.S. (AHIMA, 2018). The heterogeneity of the population and variation among demographics was examined using comparative Bureau of Labor Statistics (BLS) data (Bryman & Bell, 2015).

The survey was constructed using the Qualtrics design tool, and participants were recruited via direct email referral. The 38-item survey satisfied the 305 minimum participant threshold to capture an adequate sample size, consistent with structural power analysis and research recommendations (Wolf, Harrington, Clark, & Miller, 2013). The 12-item organizational cognition (Nimon & Zigarmi, 2015b) scale was comprised of the four 3-item subscales of distributive justice, procedural justice, growth, and performance expectation; the 8-item attitudes toward the color blue (Miller & Chiodo, 2008) scale was used as a marker variable using the confirmatory factor analysis (CFA) marker technique.
(Williams, Hartman, & Cavazotte, 2010) to examine common method variance; the 8-item perceived organizational support (POS; Rhoades et al., 2001) scale, the 6-item organization engagement (Saks, 2006) scale, and the 4-item organizational citizenship behavior as directed toward the organization (Saks, 2006) scale were used in this study. Structural equation modeling was utilized to test the specified model.

**Significance of the Study**

This study has several implications for theory, research, and practice. The operationalization of employee engagement and the maximization of organizational citizenship behaviors requires recognition of the exchange between the psychological, environmental, and resultant behaviors found in the employee and organization relationship and specifically in the context of medical coding professionals who work in the United States. Employees make cognitive and value-based judgments of their working environment with their interests in mind, which requires interaction between the employee’s current value set and the environmental factors that shape it, which results in the employee acting upon that valuation in the form of an intent to behave in a particular way (Zigarmi et al., 2009). The perceptions that an employee holds or develops can be reinforced by those with whom the employee has relationships, which has implications for research and the field (Eisenberger et al., 1986; Gouldner, 1960).

**Theory Significance**

The modeling of organizational cognition as a predictor, intervened by perceived organizational support then organization engagement, on the outcome of organizational citizenship behaviors provide academicians a robust structure to explore and expand social cognitive and social exchange research. The conceptualization of organization-
centric indicators in concert with psychological perceptions provides a framework for initiating a dialogue to bridge the practical gap between the employee and organization. Furthermore, the interaction, assessment, and valuation of the cognitive and environmental components related to the workplace are responsibilities of both the employee and organization. The intervening variables are identified as independent constructs that have discriminate fields of research, although their combined practical operationalization may provide space for further theoretical development. There is significant value to HRD and beyond when theory is constructed, modified, expanded, examined empirically, and ultimately applied in an operational setting (Torraco, 2005).

Several engagement frameworks have emerged since Kahn’s (1990) conceptualization, which have contributed to theoretical extensions that are distinctly different. Proliferation of theory and inconsistency in operationalizing the construct questions the level of effectiveness and applicability (Macey & Schneider, 2008). Examining employee engagement from the social cognitive and social exchange viewpoint is supportive of a theoretical platform that is based on thought, judgment, and evaluation leading to intended behaviors. The positive interaction of psychological processes and external stimuli will reinforce behavior that is reflective of the value placed upon the experience (Bandura, 2001). Employees who perceive that their interests are represented will positively value the relationships leading to their perception and will exchange their efforts as a result (Rhoades & Eisenberger, 2002). Employee engagement research grounded in the ongoing interchange of real or perceived contributions between the individual and the organization may approach operationalization.
Research Significance

This study examined the effects of organizational cognition (composed of the first-order factors--distributive justice, growth, performance expectations, and procedural justice), as intervened by perceived organizational support and organization engagement, on the outcome of organizational citizenship behavior (Kurtessis et al., 2017; Zigarmi et al., 2009). The modeling of perceived organizational support and organization engagement as intervening variables, particularly in a multi-step mediation model, extended current exchange and engagement research by considering the organizational orientation of the workplace, which has implications for employee and organizational outcomes. Much of the employee engagement research is based on the JD-R model; however, “there are no psychological variables that intervene or explain the relationship between specific job resources and engagement” (Saks & Gruman, 2014, p. 171). Perceived organizational support establishes an individual’s reality in consideration of the cognitive assessment they have undergone to identify the degree to which an organization is supportive of their contributions (cf. Eisenberger et al., 1986; Zigarmi et al., 2009). The global belief of organizational support provides a construct capable of contributing to an employee’s valuation within an organizational context, in addition to extending beyond the dichotomy of being present or absent to becoming recognized as a demand or resource.

The subjective appraisals of organizational elements rely upon the individual that defines their social environment. This study offers insight into existing literature or future research that examines the contributions of both the individual and organization. Social cognitive and social exchange principles afford the research community the opportunity
to explore the relationship beyond linear measurement, where interactions extend beyond
one point of measurement. Examining perceived organizational support and organization
engagement in concert with employee cognition, assists in the maximization of intended
mutual outcomes for employees and organizations.

**Practice Significance**

This study posits that examining organizational cognition, as intervened by
perceived organizational support and organization engagement concerning the outcome
of organizational citizenship behaviors, provides a platform to engage employees and
organizations into pursuing mutual objectives. Organizations that embrace the positive
contributions of their workforce and reinforce an environment that is distributively and
procedurally just, have growth opportunities, and have identified performance
expectations can facilitate support perceptions, the exhibition of engagement, and
organizational citizenship behaviors. In addition, employees who acknowledge
workplace support and are engaged can go above and beyond their assigned duties in
promoting goodwill on behalf of the organization and the stakeholders they serve.
Healthcare entities that strive for clinical and operational excellence acknowledge the
necessity of human capital investment related to employee engagement and the benefits
this has for all stakeholders (Kruse, 2015). The maximization of perceived organizational
support and organization engagement and associated outcomes requires the establishment
of dialogue and maintenance, as it does in any relationship (cf. Karanges, 2014).
Practitioners involving both the employee and the organizational leadership in the pursuit
of objectives can define and measure such components of engagement, as employee
cognition and valuations of environmental factors are responsibilities of those in the
relationship. Given the multiple frameworks and conceptualizations of engagement, practitioners who are rooted in a multidimensional mindset may design interventions with employees’ cognitions, emotions, and behaviors at the forefront. In doing so, the action of recognizing employees as an organization’s “most important asset” can establish meaning with the employees beyond merely telling them.

Human resource development (HRD) serves as a mechanism to host and shape individual and group values and beliefs with continual learning activities to further organizational performance (Wang, Werner, Sun, Gilley, & Gilley, 2017). Strategic HRD practices aim to align organizational objectives, personnel, and operations (Clardy, 2008). Organizations seeking to identify and maximize engagement and its associated outcomes recognize the contributions, development, and maintenance of relationships (Albrecht, Bakker, Gruman, Macey, & Saks, 2015). Similarly, individuals bring unique skills, perspectives, and values to the workplace that can contribute to positive organizational outcomes when they feel that the organization is supportive (Eisenberger et al., 1986). Individual characteristics such as conscientiousness, extraversion, or affect, and organizational contributions such as HR strategy, climate, and job factors have been associated with positive engagement outcomes (Albrecht et al., 2015). These characteristics and contributions rest upon the acknowledgement and importance placed upon them by those who value them. Practitioners who recognize the support contributions found within the employee and organization environment may bridge the presence or absence of job resources and demands by focusing on the strength of the relationship (Eisenberger et al., 1986). The acknowledgement of organizational cognition and states of perceived organizational support and organization engagement to exhibit
organizational citizenship behaviors is a start in the direction of examining mutual employee and organizational outcomes.

**Limitations**

Method biases not attributed to constructs can influence the results without adequate control measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Robust research designs allow researchers to rigorously infer more causal relations than standard cross-sectional designs (Cole & Maxwell, 2003). This study utilized an a priori non-experiment design to assess the identified relationships. The phantom model approach allows for the specification of indirect effects (Macho & Ledermann, 2011; Perera, 2013). The use of multiple intervening variables reduces the presence of parameter bias and increases the likelihood of accounting for proposed relationships (Preacher & Hayes, 2008). Despite these limitations, the use of a robust model, multi-step mediation, and the analysis of indirect effects for the identified hypotheses have extended existing engagement research. The context of the study involves medical coding professionals working in the United States, and therefore generalizability beyond this is limited. Cross-sectional research is limited when causal conclusions cannot be drawn, and the limitations are identified when higher level designs are not employed to capture hard data in relation to objective metrics such as individual, departmental, or organizational training, performance, or financials (Wall & Wood, 2005). Participants could anonymously complete the survey or voluntarily opt out at any point without fear of retribution. Selection bias was likely mitigated because this study’s survey was sent to all participants meeting the population sample criteria (Bryman & Bell, 2015).
Delimitations

Medical coding professionals across the United States were included in this study. They were at least 18 years of age, were full-time employees who worked 40 hours or more, and were current or past members of the American Health Information Association (AHIMA) in the states of Georgia, Louisiana, Michigan, North Carolina, and South Carolina; and therefore, generalizing beyond this group would be limited. The 12-item organizational cognition (composed of the first-order factors—distributive justice, procedural justice, growth, performance expectations) scale (Nimon & Zigarmi, 2015b) was utilized, and the results included that of a second-order construct, although conceptual recognition of the first-order indicators and the third-order construct of work cognition is noted. The 8-item survey of perceived organizational support (Rhoades et al., 2001) was utilized in place of the original 36-item survey (Eisenberger et al., 1986). In addition, Lee and Allen’s (2002) scale included 16 items to assess organizational citizenship behaviors directed toward the individual and toward the organization. This study, consistent with Saks (2006), utilized the 4-item scale for organizational citizenship behaviors directed toward the organization. The scales used in the previous studies present high reliabilities and validity coefficients, and their use assisted in the brevity of this study’s survey. Findings were consistent with the scales employed.

Assumptions

Several assumptions were made in this study to include the following: Employees and organizations share responsibility for engagement (cf. Eisenberger et al., 1986; Gouldner, 1960; Saks, 2006; Zigarmi et al., 2009); engagement related to the job and organization can facilitate outcomes beneficial to multiple parties (Saks, 2006);
workplace contributions, engagement, and outcomes vary across intervals and rely upon context; positive social exchanges have positive valuations and reciprocal effects and foster ongoing relationships (Cropanzano & Mitchell, 2005); and variations in low and high job and organizational support and engagement environments exist (Kurtessis et al., 2017; Saks, 2006).

**Definitions of Terms**

The following terms utilized in this study are defined as follows:

*Organizationally centric factors* – pertains to the variables of organizational cognition, perceived organizational support, organization engagement, and organizational citizenship behaviors; these variables emphasize the valuation or presence of organizational factors.

*Work cognition* – consists of the mental schema of existing or perceived experiences that assist in the formation of cognitive valuations (Zigarmi et al., 2011).

*Organizational-cognition* – a cluster of organizational experiences that contribute to engagement (i.e., distributive justice, growth, performance expectations, and procedural justice) in the workplace (Nimon & Zigarmi, 2015b). The term *organizational cognition* in this study refers to the higher order construct identified by Nimon and Zigarmi (2015b) and generally represents the first-order factors of the construct or the processing of thoughts related to the work environment.

*Distributive justice* – described as the perception of fairness associated with outcomes
received from an interaction or social exchange (Adams, 1965; Nowakowski & Conlon, 2005). The perception and reaction as judged by the individual in regards to the distribution of resources (Nimon & Zigarmi, 2015b).

*Procedural justice* – includes “process control,” which is “the ability to voice one’s views and arguments during a procedure” and “decision control,” which is “the ability to influence the actual outcome itself” (Colquitt, 2001, p. 388; Thibaut & Walker, 1975). Additionally, upholding several rules involves “consistency,” which is the consistent application of a process for persons over time; “bias suppression,” where “decision makers are neutral”; maintaining “accuracy of information” and “correctability,” which ensures that “appeal procedures exist for correcting bad outcomes”; “representation,” where “all subgroups in the population affected by the decision are heard from” and “ethicality,” which involves the maintenance of ethical standards and morality (Colquitt, 2001, p. 388; Leventhal, Karuza, & Fry, 1980).

*Growth* – focusses upon systematic job and career development, promotion of education and training programs, use of internal and external solutions, mentorships, higher education programs, and corporate universities (Nimon et al., 2011). Employee expectations of growth involve continuous learning opportunities on the job or in conjunction with the job (Marsick & Watkins, 2003).

*Performance expectations* – consist of in-role behaviors that are not discretionary, are connected to short-term performance periods, and are distinguishable from organizational citizenship behaviors (Nimon & Zigarmi, 2015b; Williams & Anderson, 1991).
Perceived organizational support – “employees form global beliefs concerning the extent to which the organization values their contributions and cares about their well-being” (Eisenberger et al., 1986, p. 501).

Organization engagement – participant’s psychological presence in their organization (Saks, 2006).

Organizational citizenship behaviors (OCB) – “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (Organ, 1988, p.4; Organ, 1997).

**Chapter Summary and Organization of Dissertation**

Chapter 1 provided the background and statement of the problem, the purpose of the study, and its theoretical foundations. The research hypotheses were introduced, an overview of the study design was presented, the theory, research, and practice implications were provided, and limitations, delimitations, assumptions, and definitions were presented.

Chapter 2 includes the supporting literature review. Employee engagement theories and frameworks and organizational cognition are covered. The constructs of perceived organizational support and organization engagement are introduced, the exhibition of organizational citizenship behaviors, and a healthcare transformation and medical coding professionals section are also provided. Research hypotheses and the hypothesized conceptual model are identified and discussed with theoretical support.

Chapter 3 includes the design and methods of the study. The purpose of the study, research hypotheses, design, population and sample, instrumentation, survey
design, data collection, cleaning, analysis, measurement model, common method variance, structural models, and study limitations are provided.

Chapter 4 presents the results of the analysis pertaining to the data collected for this study. The sample demographics in relation to medical coding professionals are assessed for representativeness in comparison to national BLS data. In addition, multivariate assumptions, reliability measures, and validity parameters are examined and reported. The chapter includes an analysis of measurement models, fit indices, and structural models. Common method variance is reviewed, and the chapter concludes with a summary.

Chapter 5 includes a summary of the study, introduces a multidimensional model and the study’s hypotheses. In addition, the sample group is reviewed, analyses conducted within the study are covered, and a discussion of the results included. This chapter addresses the study implications, which include theory, research, and practice implications. Limitations of the study are presented, future research suggestions are provided, and a summary concludes the chapter.
Chapter 2 - Literature Review

Introduction

This chapter reviews the relevant domains of literature for examining foundational engagement pathways, challenges among researchers and practitioners, and a structure for the practical application of engagement to maximize outcomes that benefit both the employee and the organization. The stratification and differentiation of the various types of engagement are examined within the literature review, although the terms “employee engagement” and “engagement” are used synonymously throughout this study. The literature is organized into seven sections. The first section includes employee engagement theories and frameworks. The second section introduces the construct of organizational cognition and the first-order factors of distributive justice, procedural justice, growth, and performance expectations. Section three introduces the constructs of perceived organizational support and organization engagement. Section four includes the construct of organizational citizenship behavior. Section five examines healthcare transformation and medical coding professionals. Section six includes this study’s research hypotheses, theoretical support, and hypothesized conceptual model. The final section summarizes key chapter concepts.

To conduct this literature review, the following databases were used: Academic Source Complete, Business Source Complete, PsycINFO, ProQuest, and Emerald. Google Scholar and ResearchGate were used as supplemental resources for related literature. The following search terms were used: engagement, employee
engagement, job engagement, work engagement, job well-being, distributive justice, procedural justice, growth, performance expectation, perceived organizational support, organizational support, social exchange, reciprocity, social cognitive, organizational citizenship behavior, extra role behavior, and institutional citizenship behavior. Peer reviewed journal articles, industry publications, practitioner books, Web-based HRD and psychology domains, and doctoral dissertations were reviewed from the year 1990 concerning the engagement construct; however, theoretical support and additional constructs pre-date 1990. Meta-analyses, literature reviews, and seminal articles served as supporting references for key topic areas. Relevant titles, abstracts, and information were reviewed, organized, and extracted per the literature base.

**Employee Engagement Theories and Frameworks**

This section provides background to key engagement theories and frameworks that have flourished, both in the practitioner and in the academic community. The classification of employee engagement research into key frameworks (Shuck, 2011) has neatly packaged an abundance of historical research and contributes to the proliferation of separate operationalizations of the construct. The contention is that several frameworks are not explicit in the role that organizational support provides in the employee and organization exchange relationship (cf. Shuck, Twyford, Reio, & Shuck, 2014). Engagement frameworks have lacked the explicit employee valuation for the role organizations play in providing support to the employee. The operationalization of engagement must be built upon and encompass the exchange and valuation of contributions between the employee and organization.
Employee engagement theories, definitions, and conceptualizations have encountered confusion in the practitioner and academic community, partly due to their emergence (Schaufeli, 2013). Schaufeli (2013) stated that the ground-up approach in the business community is directly at odds with the academic approach, which requires clarity and unambiguity in its approach. These approaches have conflicted with the end goal or desired outcomes which should be manifested with an appropriate operationalization. The Gallup Organization is identified as coining the term engagement as it relates to work in the 1990s and has perpetuated the use of an engagement questionnaire measuring workplace perceptions (Schaufeli, 2013). Additionally, the impetus for engagement in the workplace resulted from businesses seeking to maximize competitiveness, which required a greater investment of employee’s psychological energy. Employees had to adapt to the changing environment by assuming greater responsibilities with fewer resources. Engagement as described by Merriam-Webster (2016) includes an agreement for marriage, a meeting between parties, or the act of being committed or emotionally involved.

Several practitioner-based engagement definitions are provided to illustrate the complexity serving as the basis for solutions provided to organizations (see Table 1). The nomological challenges, variability in language, and presumed application provide a landscape different from that found in academic literature. The themes identified include one’s involvement, enthusiasm, commitment, and discretionary effort to achieve or fulfill results, which include behavior, tasks, work, and goals. The common purpose in these definitions is the maximization of a certain energy to produce organizational outputs.
The term engagement utilized within the academic community was coined by Kahn (1990), who explored the needs-satisfying theoretical network (Shuck, 2011) to bring people in or out of certain task behaviors at work. Summer camp counselors and employees of an architecture firm were observed in order to provide a wide net for generalizing due to their different organizational structures. Kahn (1990) posited that people activate various physical, cognitive, and emotional levels to perform roles while maintaining a boundary between themselves and the role. Additionally, the more people draw from these levels, the more likely they are to perform and demonstrate their comfort in doing so. As previously noted, Kahn (1990) refers to engagement “as the harnessing of organization members’ selves to their work roles,” where disengagement is mentioned “as the uncoupling of selves from work roles” (p. 694). Previous job design studies helped inform Kahn’s research, which involved working conditions, role characteristics, interpersonal, intrapersonal, and group dynamics to facilitate or inhibit individual motivation and meaning. Furthermore, organizational context and environmental support conditions provided a platform for employees to exhibit physical, cognitive, and emotional energy in their roles.

Kahn (1990) identified the psychological conditions of meaningfulness, safety, and availability in which people engage or disengage at work. People’s perceptions serve to mediate the relationship between work context and the psychological conditions that lead to engagement. Meaningfulness refers to the return an employee receives from the element of self that has been invested in a role (Kahn, 1990). Additionally, feeling valued, worthwhile, and incentivized for being engaged is facilitated by working conditions that offer variety, autonomy, creativity, and a challenge. Individual and
coworker interactions that promote dignity and value and contain personal and professional elements assist in fostering meaningfulness (Kahn, 1990).

Psychological safety is reinforced when employees can exhibit themselves without fear for their image, reputation, or livelihood (Kahn, 1990). Additionally, organizational conditions and relationships that promote trust, flexibility, security, predictability, support, openness, and consistency provide an avenue for safety and engagement. Furthermore, employees contribute to the environmental conditions framed by the organization to perpetuate values, norms, and culture.

Psychological availability consists of having the necessary physical, emotional, and psychological energy to invest oneself in a particular role (Kahn, 1990). Individuals who are focused, committed, secure, and confident in their ability and status are more likely to make themselves available for engagement (Kahn, 1990). The characterization of engagement as illustrated by Kahn (1990) requires the contextual environment and working conditions necessary to illicit the behavior. The reciprocal interaction of the organizational and individual contributions necessary for engagement can be likened to that of a marriage (Engagement, n.d.).

The antithesis framework for work engagement includes the opposite phenomenon of burnout (Shuck, 2011). Practitioners and researchers utilized the term burnout in the 1970s to describe human service workers who had visibly lacked motivation, depleted emotional energy, and decreased levels of commitment (Schaufeli, Leiter, & Maslach, 2009). Maslach (1976) witnessed workers detach their level of concern, develop negative idealizations of patients, and exhibit lapsing competence resulting from sheer emotional exhaustion (Maslach, 1976, 1993; Schaufeli et al., 2009).
Human service workers who provided care to patients which involved significant time and energy were observed to be more cynical and impersonal, distanced, and emotionally guarded (Maslach et al., 2001). Additionally, the provider and patient relationship was shown to be affected by job characteristics such as the client census and workload, the amount of resources, patient feedback, and nonverbal behaviors.

Maslach and Leiter (1997) proposed that burnout was the opposite pole to engagement and consisted specifically of exhaustion, cynicism, and reduced efficacy, while “engagement is characterized by high energy, high involvement, and high efficacy” (Leiter & Maslach, 1999, p. 475). As suggested, the context of the working environment and conditional stressors contribute toward an individual’s manifestation of either burnout or engagement. According to Maslach and Leiter (1997), the six general categories of workload, control, reward, community, fairness, and values encompass the domains that support the organizational and individual interaction. The mismatch or incongruency in the interaction may create instability or promote levels of burnout or engagement (Leiter & Maslach, 1999).

The positive psychology movement is partly responsible for the development of the antipode to burnout, where researchers have advanced the positive benefits and outcomes attributed to engagement or well-being (Schaufeli et al., 2002; Seligman & Csikszentmihalyi, 2000). Maslach and Leiter (1997) contend that burnout and engagement are part of a continuum measured with the same instrument, whereas Schaufeli and Bakker (2004) assert their distinctiveness and negative relationship. Specifically, engagement is defined “as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002, p. 74).
Vigor is characterized by individuals exhibiting high levels of energy, mental resilience, receptiveness to contributing to work, and persistence over difficulties.

Dedication involves feelings of enthusiasm, inspiration, pride, and a sense of significance in being involved in the work. Absorption refers to being so engrossed in one’s work that time passes quickly without detachment from the job, which makes disengagement difficult (Maslach et al., 2001; Schaufeli et al., 2002; Schaufeli & Bakker, 2004). The definitional and conceptual challenges between burnout and engagement in the anti-thesis framework are noted.

Harter, Schmidt, and Hayes (2002) utilized data from 7,939 business units in 36 companies to examine the relationship between employees and business outcomes. Specifically, the satisfaction-engagement framework (Shuck, 2011) compared business-unit level data with business-unit outcomes, where employee satisfaction-engagement impacted productivity, satisfaction, turnover, accidents, and profit. Harter, Schmidt, and Hayes (2002) utilized the Gallup Workplace Audit and defined employee engagement as “the individual’s involvement and satisfaction with as well as enthusiasm for work” (p. 269). Similar to other consultancy firms, engagement appears to share or overlap conceptual space with well-known constructs such as job involvement, satisfaction, and enthusiasm (Schaufeli, 2013). Schaufeli (2013) noted the instrumentation’s operationalization, which focuses on job resources and serves to improve the environment for employees in terms of satisfaction. The academic and practical contributions of the satisfaction-engagement framework are noted, specifically in bridging unit-level data with business-level outcomes.
Consistent with Kahn (1990), engagement occurs when employees make an emotional and cognitive connection to what is expected of them, understand how work needs to be done, have the ability to feel fulfillment or meaning in the work, and feel a shared significance with their coworkers (Harter et al., 2002). Additionally, the employee and organizational partnership or relationship for engagement involves coworker and manager trust, opportunities for improvement or development, being invested in a tool’s results, and the motivation to act on feedback. The contributions of the individual and the organization can be contextually evaluated and operationalized from both the academic and practical perspective; however, the definition and conceptualization must be considered.

The multidimensional framework (Shuck, 2011) examines engagement by utilizing multiple approaches and disciplinary elements. Table 1 outlines the commonly cited academic and practitioner definitions, in which the multidimensional conceptualizations more aptly accommodate the exchanges between the employee and organization. Saks (2006) was instrumental in establishing the drivers and consequences of employee engagement in relation to the job and organization. The use of social exchange theory was offered as an extension to Kahn’s (1990) and Maslach, Schaufeli, and Leiter’s (2001) conceptualization of engagement. The reciprocal nature of social exchange as it relates to engagement involves both the individual and the organization (Saks, 2006). Additionally, individuals engage differently toward the job and organization when feeling supported is a strong determinant, elements of fairness predict organization engagement, and both job and organization engagement mediated antecedent relationships with intentions to quit, organizational commitment, job
satisfaction, and organizational citizenship behavior. According to Saks (2006), the meaning and definition of engagement overlaps with other constructs in the practitioner literature, with the academic literature defining it “as a distinct and unique construct that consists of cognitive, emotional, and behavioral components that are associated with individual role performance” (p. 602). The context of individual and organizational exchange provides a conceptual bridge for engagement research.

Table 1

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<thead>
<tr>
<th>Academic Definitions</th>
<th>Practitioner Definitions</th>
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<tr>
<td>“the harnessing of organization members’ selves to their work roles” (Kahn, 1990, p. 694).</td>
<td>“is the involvement with and enthusiasm for work.” (Gallup Organization; Vance, 2006, p.3).</td>
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<td>“engagement is characterized by high energy, high involvement, and high efficacy” (Leiter &amp; Maslach, 1999, p. 475).</td>
<td>“is the state of emotional and intellectual commitment to an organization or group producing behavior that will help fulfill an organization's promises to customers - and, in so doing, improve business results.” (Hewitt Associates; Vance, 2006, p.3).</td>
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<tr>
<td>“a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli et al., 2002, p. 74).</td>
<td>“the extent to which employees commit to something or someone in their organization, how hard they work and how long they stay as a result of that commitment.” (Corporate Leadership Council; Vance, 2006, p.3).</td>
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<tr>
<td>“the individual’s involvement and satisfaction with as well as enthusiasm for work” (Harter et al., 2002, p. 269).</td>
<td>“is the extent to which employees are motivated to contribute to organizational success, and are willing to apply discretionary effort (extra time, brainpower and effort) to accomplishing tasks that are important to the achievement of organizational goals.” (Kenexa; Vance, 2006, p.3).</td>
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Table 1

*Academic and Practitioner Definitions and the Multidimensional framework*

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<td>Multidimensional framework</td>
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<td>“as a distinct and unique construct that consists of cognitive, emotional, and</td>
<td>“a desirable condition, has an organizational purpose, and connotes involvement,</td>
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<td>behavioral components that are associated with individual role performance” (Saks,</td>
<td>commitment, passion, enthusiasm, focused effort, and energy, so it has both attitudinal</td>
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<tr>
<td>“a desirable condition, has an organizational purpose, and connotes involvement,</td>
<td>“an individual’s persistent, emotionally positive, meaning-based, state of well-being</td>
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<td>commitment, passion, enthusiasm, focused effort, and energy, so it has both attitudinal</td>
<td>stemming from reoccurring cognitive and affective appraisals of various job and</td>
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<td>and behavioral components” (Macey &amp; Schneider, 2008, p. 4).</td>
<td>organizational situations that results in consistent, constructive work intentions and</td>
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<td></td>
<td>behaviors” (Zigarmi et al., 2009, p. 310).</td>
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<td>“an individual employee’s cognitive, emotional, and behavioral state directed toward</td>
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<td></td>
<td>desired organizational outcomes” (Shuck &amp; Wollard, 2010, p. 103).</td>
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*Note.* Definitions across several frameworks.

Macey and Schneider’s (2008) multidimensional model considered antecedents and outcomes in addition to providing clarity for psychological states, traits, and
behaviors. Precision in the engagement concept is lacking, but its conceptual or practical utility is not diminished; however, a model that supports the psychological state and implied behaviors is required (Macey & Schneider, 2008). Macey and Schneider (2008) define engagement as “a desirable condition, has an organizational purpose, and connotes involvement, commitment, passion, enthusiasm, focused effort, and energy, so it has both attitudinal and behavioral components” (p. 4). Additionally, their integration of the business and academic views of engagement includes state of engagement, including feelings of energy and absorption; trait engagement, which includes a positive outlook on life and work; and behavioral engagement, which includes organizational citizenship behavior, role expansion, and personal initiative (Schaufeli, 2012). Macey and Schneider’s comprehensive framework is criticized for being exhaustively inclusive; however, it has facilitated model creation and the operationalization of the construct (Saks, 2008; Schaufeli, 2013).

Zigarmi, Nimon, Houson, Witt and Diehl’s (2009) multidimensional model responds to practitioner and academic literature by reframing the construct of engagement and operationalizing it with what is known as “employee work passion.” The need for differentiating employee work passion from engagement was in response to the well-known associations of burnout and job involvement, commercial uses of organizational commitment, and the lack of precision found in engagement (Zigarmi et al., 2009). Specifically, the term engagement does not adequately represent the cognitive, affective, and intention components as found in social cognitive theory and appraisal research (Zigarmi et al., 2009). Zigarmi, Nimon, Houson, Witt and Diehl (2009) defined employee work passion as “an individual’s persistent, emotionally positive, meaning-
based, state of well-being stemming from reoccurring cognitive and affective appraisals of various job and organizational situations that results in consistent, constructive work intentions and behaviors” (p. 310).

The three common components of cognition, affect, and intention must be present in all definitions of engagement and can be satisfied by utilizing the appraisal construct (Zigarmi et al., 2009). The response to having a clear psychological model to explain engagement or work passion and the development of a social cognitive model to measure the concept contributed to the development of the appraisal process model (Zigarmi & Nimon, 2011). Additionally, the model distinguished the four key elements of employee work passion—work cognition, work affect, job well-being, and work intentions. The social cognitive view provides that individuals are not “driven by inner forces” or “automatically shaped” by environmental stimuli, but that the internal and external contributions as applied to an employee or organization are interactive and influencing of each other (Bandura, 1986; Zigarmi et al., 2009, p. 313).

Shuck and Wollard (2010) identified the knowledge gap that existed between the needs of organizations and the ability of employees to respond in an effective manner. The links between engagement and outcomes must be grounded in research, be effective, and be meaningful for the continued growth and manifestation of the construct (Shuck & Wollard, 2010). Shuck and Wollard’s (2010) integrated literature review historically situated the engagement construct and proposed a working definition of this construct as “an individual employee’s cognitive, emotional, and behavioral state directed toward desired organizational outcomes” (p.103). Cognitive engagement may address an employee’s thought and ownership of their understanding of the organization, job,
culture, and overall commitment to the company (Shuck & Wollard, 2010). Additionally, emotional engagement could explore beliefs and feelings and how they may be formed or influenced. Furthermore, behavioral engagement may explore objective instrumentation for visible and measurable results and outcomes (Shuck & Wollard, 2010). Finally, the reasons employees choose to engage should be understood at the individual, unit, and organizational level. Organizations and individuals who are equipped with a common definition, method for measurement, and conceptualization may maximize engagement and its associated outcomes (Shuck & Wollard, 2010).

Shuck (2011) noted that the four engagement frameworks provide a foundation for future development of working environments to understand how employees relate to work and how theory and research can propel practical solutions. Schaufeli (2013) pointed out that the four frameworks of engagement emphasize different qualities of engagement. Specifically, the emphasis includes engagement’s relation to role performance (needs-satisfying framework), the positivist approach of employee well-being in comparison to the opposite construct of burnout (burnout-antithesis framework), the association with resourceful jobs (satisfaction-engagement framework), and the relationship with the job and the organization (multidimensional framework). The packaging of engagement research into the four frameworks is beneficial toward existing research; however, it may further contribute to the proliferation of conflicting constructs.

Considerable attention has been paid to the multidimensional framework as the definitions, models, and conceptualizations represented seek to bridge the academic and practitioner gap. The theoretical support identified in Saks (2006) and Zigarmi, Nimon, Houson, Witt and Diehl (2009) and used in this study aligns with social cognitive and
social exchange principles. The contributions of the individual and organization are recognized as being interactive and complimentary when considering the mutual proposition for employee engagement and outcomes. This study utilized key components developed within the context of the multidimensional framework. Specifically, the organizational experiences concerning organizational cognition had an indirect effect on employee exhibition of organizational citizenship behaviors, through organization engagement as intervened by the construct of perceived organizational support via multi-step mediation.

**Organizational Cognition**

Cognitive valuations of the working environment can be identified as predictors of engagement, as intentions, and their associated behaviors can be identified as outcomes (Nimon et al., 2011). Nimon, Zigarmi, Houson, Witt, and Diehl (2011) designed the Work Cognition Inventory (WCI) to capture the cognitive components of the work environment. Further refinement of 35 factors resulted in 12 retained factors in the revised WCI instrument (WCI-R; Nimon & Zigarmi, 2015b), and the constructs were theoretically organized into three groups which focused upon job, organizational, and people experiences. This study focused on the second-order factor of organizational cognition, specifically identified by the four first-order factors, distributive justice, procedural justice, growth, and performance expectations.

**Distributive Justice**

The study of justice connotes the ideas of rule or ethics of what is righteous, and its social construction can be dated back to the earliest philosophers (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt, Zipay, Lynch, & Outlaw, 2018). Social
psychologists have examined the concept of organizational justice for the past 40 years, where distributive justice emerged from the fairness construct (Nowakowski & Conlon, 2005). Distributive justice can be described as the perception of fairness associated with outcomes received from an interaction or social exchange (Adams, 1965; Nowakowski & Conlon, 2005). Adams (1965) emphasized that people were not particularly concerned with the level of outcomes but rather with the fairness associated with those outcomes (Colquitt et al., 2001). The contributions or inputs provided by an individual such as their education, experience, and aptitude could be measured with their resultant outcome and compared with another individual (Adams, 1965; Colquitt et al., 2001). The emphasis on equity, equality, and need have all provided a basis for allocation and achieving distributive justice; however, the construct has been examined with different rules (Colquitt et al., 2001). Nimon and Zigarmi (2015), state that distributive justice involves an “individual’s reaction to the nature, level, and distribution of organizational rewards, much to the exclusion of the quality of the decisions through which those rewards are given” (p. 120).

In the development of the Work Cognition Inventory (WCI), Nimon, Zigarmi, Houson, Witt, and Diehl (2011) utilized the distributive fairness factor over the interactive and procedural fairness factors as a result of the construct being extensively researched in the meta-analyses and single studies examined and the overlap present between distributive fairness and rewards scales not measuring fairness. The revised Work Cognition Inventory (WCI-R) split the construct of fairness to include distributive justice and procedural justice so as to avoid the blurring of the types of justice found in a single construct (Nimon & Zigarmi, 2015b). Nimon and Zigarmi (2015b) emphasized
that the development of WCI-R entailed examining the frequency of cognitive factors and their correlations with various outcome variables such as job satisfaction, organizational commitment, intention to stay, and organizational citizenship behavior.

The identification of distributive justice as an organizational cognitive factor provides an opportunity to examine employee engagement and associated outcomes by considering psychological and organizationally centric indicators. Distributive justice regarding pay decisions is considered to be more stable than discretionary and likely the result of factors beyond the organization’s control (Kurtessis et al., 2017). The basis for outcomes concerning pay, benefits, or resources may largely be attributed to external factors (i.e., contracts, economic conditions); however, the perception of distributive justice being discretionary or not will impact an employee’s cognitive valuations. Distributive justice research has provided bivariate support for this study’s variables (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Colquitt et al., 2013; Ghosh, Rai, & Sinha, 2014; Malinen, Wright, & Cammock, 2013; Saks, 2006).

In a meta-analysis of organizational justice dimensions, distributive justice showed a correlation with POS \((r = .45)\) and a large corrected value for unreliability \((r = .51)\), and in a separate hypothesis, entity-based distributive justice showed a correlation and corrected correlation \((r = .48, .54)\) with POS (Colquitt et al., 2013). In addition, Kurtessis, Eisenberger, Ford, Buffardi, Stewart, and Adis (2017) showed meta-analytic support for perceived organizational support and its relationship with distributive justice \((\rho = .57)\). Prior to Saks (2006), the relationship between fairness perceptions and employee engagement had not been previously researched. Saks (2006) modeled distributive justice as an antecedent to organization engagement, and the correlation \((r = \)
.33) was stronger than that for job engagement (Saks, 2006). In addition to this influential study, two studies were identified in modeling distributive justice as an antecedent to organization engagement, which served as a mediator and as an outcome (Ghosh et al., 2014; Malinen et al., 2013). Ghosh, Rai, and Sinha (2014) reported a high correlation between distributive justice and organization engagement \( (r = .51) \), and Malinen, Wright, and Cammock (2013) reported a smaller correlation \( (r = .27) \) between the two measures.

The relationship between distributive justice and organizational citizenship behaviors directed toward the organization is recognized. Colquitt, Scott, Rodell, Long, Zapata, Conlon, and Wesson (2013) reported that distributive justice and OCBO had a correlation and corrected correlation \( (r = .18, .22) \) with OCBO, and in a separate hypothesis examined entity based distributive justice and OCBO, the correlation and corrected correlation values \( (r = .19, .24) \) were reported. The presented correlations are reflective of a previous meta-analysis, which identified the correlation and corrected correlation between distributive justice and OCBs referencing the organization \( (r = .20, .25) \) (Colquitt et al., 2001). In a Ken Blanchard Companies (2011) publication, distributive justice was found to correlate best with an employee’s intent to remain and intent to endorse. It was shown that equitable distribution of resources, benefits, and compensation impacts an employee’s decision to stay over time and whether they will acknowledge that their organization as a good place to do work or business (Ken Blanchard, 2011). The medium correlation for distributive justice and organizational citizenship behavior \( (.33; Ken Blanchard, 2011) \) may not be at the forefront in the context of the employee engagement factors; however, the inclusion of intervening
variables oriented toward the organization may provide additional grounds for examination.

**Procedural Justice**

Procedural justice addresses organizational fairness as it relates to processes affecting individual stakeholders who are affected by the outcomes (Chullen & Rowe, 2018; Colquitt et al., 2001). The characterization of procedural justice consists of procedures being unbiased, outcomes free of vested interests, applications applied consistently to all persons, accurate collection of information that is considered in decision making, and the sustainment of ethical and moral standards (Colquitt et al., 2001; Leventhal et al., 1980). Social exchange principles may oblige employees to reciprocate procedural justice and fairness in the performance of their duties and the investment of their effort (Saks, 2006). Organizations that are procedurally just offer a climate that is conducive to justice in coworker and leadership interactions (Kurtessis et al., 2017). Employees who believe the organization to be procedurally fair, consistent, and representative of their interests exhibit high perceived organizational support (Rhoades & Eisenberger, 2002).

In Rhoades and Eisenberger’s (2002) meta-analysis, fairness inclusive of procedural justice showed the strongest relationship with perceived organizational support. Fairness perceptions may be considered to be highly discretionary and within the control of upper management because a procedurally just organization creates an impression of caring for an employee’s contributions and well-being (Rhoades & Eisenberger, 2002). Correlation values from previous research are reported to support the identified relationships (Colquitt et al., 2001; Colquitt et al., 2013; Ghosh et al., 2014;
Malinen et al., 2013; Rhoades & Eisenberger, 2002; Saks, 2006). Colquitt, Scott, Rodell, Long, Zapata, Conlon, and Wesson (2013) examined organizational justice dimensions and reported the correlation and corrected correlation between procedural justice and perceived organizational support (r = .51, .59), and in a separate hypothesis involving entity-based distributive justice, they reported a correlation and corrected correlation with POS (r = .53, .61). Similarly, Rhoades and Eisenberger (2002) reviewed 18 different samples in a meta-analytic study and reported an average weighted and average weighted corrected correlation (r = .54, .59) for procedural justice and POS.

Nimon and Zigarmi (2015b) included procedural justice as an organizational cognition factor that contributes to engagement or employee work passion. Procedural justice is identified as an organizational cognition that results in valuations of the job and organization, which presumably would evoke stronger correlations with perceived organizational support and organization engagement and facilitate an individual’s exhibition of organizational citizenship behaviors. Studies have examined procedural justice with organization engagement (Ghosh et al., 2014; Malinen et al., 2013; Saks, 2006). Malinen, Wright, and Cammock (2013) modeled procedural justice and organization engagement and showed a correlation (r = .37), as did Ghosh, Rai, and Sinha (2014), who modeled organization engagement (r = .54) as an outcome variable of procedural justice. As indicated, Saks (2006) included justice perceptions as an antecedent to organization engagement, and a correlation with procedural justice (r = .41) was reported.

Procedural justice has shown positive correlations with outcome variables such as job satisfaction, organizational commitment, performance, and organizational citizenship
behaviors (Colquitt et al., 2001). In the Ken Blanchard (2011) publication, procedural justice had the highest correlations with employee intent to endorse (.635) and employee intent to remain (.530). Correlations for procedural justice and employee intent to exhibit organizational citizenship behaviors (.476) and employee intent to exhibit discretionary effort (.511) were also identified (Ken Blanchard, 2011). These correlations are partly indicative of the cognitive valuations that occur in relation to the employee’s vested interest in the fairness of policies, procedures, and decisions within an organization.

Perceived organizational support and the positive correlation with organizational citizenship behavior has been evidenced, as employee effort extends beyond in-role behaviors to exhibit OCBs on behalf of other employees (OCB-I) and the organization (OCB-O; Kurtessis et al., 2017). As identified in their meta-analysis, Colquitt, Scott, Rodell, Long, Zapata, Conlon, & Wesson (2013) provided correlations with justice dimensions and reported a correlation and corrected correlation for procedural justice and OCBO (r = .25, .32), and reported the following correlations (r = .25, .33) for entity-based procedural justice and OCBO. The identified correlations are consistent with Colquitt, Conlon, Wesson, Porter, and Ng (2001), who reviewed 15 broadly defined studies involving procedural justice and organizational citizenship behaviors that referenced the organization, and reported the meta-analytic correlations (r = .23, .27).

Growth

In the design of a learning organization questionnaire Marsick and Watkins (2003) utilized continuous learning opportunities as a dimension to identify the expectations of learning on the job, ongoing education, and growth. Learning organizations can be characterized as proactively integrating and catalyzing growth in
individuals, groups, teams, organizations, as well as in communities which they serve or benefit (Marsick & Watkins, 2003). Nimon, Zigarmi, Houson, Witt, and Diehl (2011) noted that growth in organizations focus upon systematic job and career development, promotion of education and training programs, use of internal and external solutions, mentorships, higher education programs, and corporate universities.

The Work Cognition Inventory (Nimon et al., 2011) and the revised form (WCI-R; Nimon & Zigarmi, 2015b) utilized growth as a factor that correlated highly with outcome variables associated with engagement. Specifically, growth showed strong meta-analytical correlations with job satisfaction and organizational commitment (Mathieu & Zajac, 1990; Nimon et al., 2011). Consistent with these correlations, Ken Blanchard (2011) highlighted the strong correlations for growth and an employee’s intent to remain (.618) and growth with an employee’s intent to endorse (.545). As noted, the correlation for growth and organizational citizenship behavior (.345) was moderate in comparison; however, the incorporation of intervening variables to assess the workplace may provide additional insight (Ken Blanchard, 2011). The examination of psychological and organizational factors in engagement research is beneficial in extending beyond the job-centric domain.

In classifying growth as an organizational cognition, it is appropriate to examine perceived organizational support and organization engagement and their correlations with organizational citizenship behaviors. Growth as characterized by developmental opportunities in a meta-analytic study showed a corrected mean correlation (ρ = .57) in association with the support employees perceive from the organization (Kurtessis et al., 2017). Eisenberger, Cummings, Armeli, and Lynch (1997) found that developmental
training opportunities were viewed as the strongest job condition recognized by employees to be under the discretionary control of the organization, which is most indicative of POS (Kurtessis et al., 2017). In addition to the uncorrected mean correlation ($r = .50$) reported between developmental opportunities and perceived organizational support (Kurtessis et al., 2017), Wayne, Shore, and Liden (1997) reported a correlation ($r = .45$) for developmental opportunities and POS. Employees working in organizations with opportunities for growth, who participate in decision making and perceive fairness of rewards contribute to perceived organizational support (Allen, Shore, & Griffeth, 2003). Growth or developmental opportunities indicative of support have been packaged as a job resource or as a component of human resource practices (Allen et al., 2003; Wayne et al., 1997).

There were no identified studies that examined growth or developmental opportunities with organization engagement, although several work engagement studies identified developmental opportunities in the context of job resources (Bakker & Bal, 2010; Bakker, Emmerik, & Euwema, 2006; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Employees with growth opportunities and who feel supported by the organization are more likely to reciprocate in the form of effort and organizational citizenship behaviors (Kurtessis et al., 2017). Wayne, Shore, and Liden (1997) reported a correlation ($r = .22$) for developmental experiences with the outcome of OCB. Progressive organizations and transformational HRD environments identify the need to support employee development and growth (Gilley, Maycunich, & Quatro, 2002). Furthermore, employees will seek to reciprocate effort when they feel that their
contributions and general well-being are valued (Eisenberger et al., 1986), and this can be actualized in the investment toward employee growth and development opportunities.

**Performance Expectations**

Performance expectation is an identified standard with an aim to achieve a specified outcome (Schlicht, 2018; SHRM, 2015). Williams and Anderson (1991) demonstrated that extra-role behaviors can be empirically distinguished from in-role behaviors and in-role behaviors are distinguishable from organizational citizenship behaviors (Nimon & Zigarmi, 2015b). Performance expectations consist of in-role behaviors that are not discretionary, are connected to short-term performance periods, and are distinguishable from organizational citizenship behaviors (Nimon & Zigarmi, 2015b; Williams & Anderson, 1991). Williams and Anderson (1991) identified in-role behaviors as behaviors recognized by a formal reward system and that as such are part of the job requirements specified in the job description.

The revised form of the Work Cognition Inventory (WCI-R; Nimon & Zigarmi, 2015b) includes performance expectation as a new construct and identifies the correlations (rs = .37 - .42) found in Tompson and Werner (1997) regarding individual initiative, interpersonal helping, personal industry, and loyal boosterism. The distinction for performance expectations or in-role (task performance) and organizational citizenship behavior (contextual performance) is noted, despite the correlation found between organizational citizenship dimensions and traditional measures of performance (MacKenzie, Podsakoff, & Fetter, 1991; Puffer, 1987; Werner, 2000). Nimon and Zigarmi (2015b) also provide the correlations of performance expectations with satisfaction, affective organizational commitment, and perceived organizational support.
(rs = .20 - .22), as identified in Randall, Cropanzano, Bormann, and Birjulin (1999). In comparison, Ken Blanchard (2011) found performance expectations correlating most favorably with an employee’s intent to endorse (.465) and an employee’s intent to remain (.412). It is noted that the intent to exhibit discretionary effort is defined as the behavior of an individual who on behalf of the organization goes above and beyond agreed requirements, whereas intent to exhibit organizational citizenship behaviors is defined as the behavior of an individual who is committed to the support of coworkers and acts in a considerate, sensitive, and respectful way to others (Ken Blanchard, 2011). Performance expectations and the connection with organizational citizenship behavior is likely obscured as a result of design and measurement, despite the medium correlation (.345) found in the Ken Blanchard (2011) study.

The contention in this study is that a design incorporating performance expectations, and the intervening variables perceived organizational support and organization engagement, provide greater support for an employee’s intending to exhibit organizational citizenship behaviors as related to the organization. Performance expectations provide for employees to be included in a framework of individual and organizational outcomes, which allows them to feel that their effort is a contribution toward those outcomes. Kurtessis, Eisenberger, Ford, Buffardi, Stewart, and Adis (2017) emphasize the positive relationship between POS and in-role performance (ρ = .19), noting that POS was more strongly correlated with OCB-O (ρ = .40) than OCB-I (ρ = .19) and affective commitment served as a stronger mediator for POS on OCB than POS on in-role performance.
In addition to the identified studies, bivariate correlations are reported and values reflect reporting performance expectation as an outcome measure. Rhoades and Eisenberger (2002) identify the in-role performance correlation and corrected correlation (.16, .18) with perceived organizational support. These are consistent with the values reported in Nimon and Zigarmi (2015b) and may position the variable closely in line but distinct from organizational citizenship behaviors. Performance expectations or in-role behaviors have shown a positive relationship in engagement research (Bakker, Demerouti, & Verbeke, 2004; Bakker et al., 2008; Schaufeli, Taris, & Bakker, 2006), although no studies have been reported for organization engagement. The distinct conceptualizations of job and organization engagement (Saks, 2006) provide a valued addition for this study to focus upon organizationally centric measures. Randall, Cropanzano, Bormann, and Birjulin (1999) reported a correlation for in-role performance and organizational citizenship behaviors toward the organization \((r = .26)\), and Huang and You (2011) reported correlations of in-role behaviors and OCB \((r = .13)\) as directed toward the organization.

**Perceived Organizational Support and Organization Engagement**

Shimazu and Schaufeli (2009) acknowledged the concept of job well-being or work engagement as emerging from burnout research, because organizations need employees to be engaged rather than merely “healthy.” Zigarmi, Nimon, Houson, Witt, and Diehl (2011) highlighted the need to extend beyond the job domain to consider the organizational dimension, as the concept of well-being should address other dimensions. Perceived organizational support evaluates the overarching views employees hold about the organization and whether the organization cares about their contributions and overall
well-being (Eisenberger et al., 1986). The global belief that an organization cares for the employee’s well-being is reciprocated in the form of positive energy and effort directed back at the organization (Eisenberger et al., 1986; Kurtessis et al., 2017; Rhoades & Eisenberger, 2002). Employees who cognitively perceive that their job and organizational environment is beneficial to their interests will resultantly intend to exhibit behaviors which are beneficial to the organization (Zigarmi et al., 2009). The use of perceived organizational support (POS) in this study does not assume an organizational equivalence to job well-being, although it serves as a measure to address the perceived support an individual attributes to the organization, despite the definition of POS being inclusive of an employee’s “well-being” (Eisenberger et al., 1986). The inclusion of a measure for organization engagement as an intervening variable with POS, in a multi-step mediated model, clearly orients the study beyond the domain of the job.

The relationships between the cognitive factors of distributive justice, procedural justice, growth, and performance expectations with well-being have been previously identified. In addition, the first-order factors of distributive justice, procedural justice, and variations of growth and performance expectations have served as an antecedent to perceived organizational support (Kurtessis et al., 2017). The inclusion of perceived organizational support and organization engagement in a multidimensional model provides a valued addition beyond the job domain of well-being. Previous research has situated POS as an antecedent to engagement in addition to classifying organizational support as a job resource that precedes work engagement (Biswas & Bhatnagar, 2013; Malinen & Harju, 2017; Rich et al., 2010; Saks, 2006; Sohrabizadeh & Sayfouri, 2014). The contributions of the employee and the organization in a social exchange relationship
are evaluated across time and contexts. The global belief that an organization cares about an employee’s contributions and efforts would actualize the cognitive inferences leading to behavior (cf. Eisenberger et al., 1986; Zigarmi et al., 2009). Implications that perceived organizational support can be dichotomized as a demand or a resource limit the vitality and prominence in the employee and organization relationship, albeit with the construct being evaluated from the employee perspective. This study indicates that the presence of perceived organizational support and organization engagement offers a holistic platform to maximize employee’s exhibition of organizational citizenship behaviors. Environments with low, high, and mixed levels of perceived organizational support and organization engagement are acknowledged, as are the practical implications of imbalance present in a relationship.

Saks (2006) was instrumental in modeling job and organization engagement separately in recognition of the separate domains found in the workplace. In Saks’s study, perceived organizational support served as an antecedent to both measures of engagement, which served as significant predictors of organizational citizenship behaviors directed toward the organization (Saks, 2006). Saks (2006) reported correlations for perceived organizational support and organization engagement \( r = .58 \) and organization engagement to OCBO \( r = .42 \). Consistent with Saks (2006), job engagement and organization engagement have been modeled as mediators to POS and the outcomes of job satisfaction and organizational commitment (Biswas & Bhatnagar, 2013; Malinen & Harju, 2017). Biswas and Bhatnagar (2013) combined the measures of job engagement and organization engagement into a single measure, which departs from Saks’s (2006) contribution. Malinen and Harju (2017) reported a correlation for
perceived organizational support and organizational engagement ($r = .25$), which exceeded the correlation for job engagement and POS.

Since Saks’s (2006) study, no studies have been identified as examining organization engagement and organizational citizenship behaviors, although other engagement measures have been modeled with organizational support measures and OCB; see Table 2 (Rich et al., 2010; Sohrabizadeh & Sayfouri, 2014). Table 2 indicates studies that associate organizational support measures and measures of engagement intervening on outcomes that include organizational citizenship behaviors. These variables are highlighted as the studies cited also included other predictor and criterion variables. Sohrabizadeh and Sayfouri (2014) utilized the measure of work engagement to mediate the relationship between a combined measure of supervisory and organizational support and organizational citizenship behavior. When Rich, LePine and Crawford (2010) used the cognitive, affective, and physical components of their measure of engagement to mediate POS and organizational citizenship behavior, the correlation between POS and OCB ($r = .32$) was reported. These studies highlight the association between POS, engagement, and organizational citizenship behavior; the multiple facets of engagement; and the importance of the employee and organization relationship. The incorporation of perceived organizational support and organization engagement (as intervening variables) to examine organizational cognition (predictor) and the exhibition of organizational citizenship behaviors (outcome) is fitting.
Table 2

*Studies Including Organizational Support with Engagement*

<table>
<thead>
<tr>
<th>Study</th>
<th>Constructs</th>
<th>Instrument</th>
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<tbody>
<tr>
<td>Saks (2006)</td>
<td>POS &gt; job and organization engagement &gt; OCBI, OCBO</td>
<td>Job and organization engagement measure (Saks, 2006)</td>
</tr>
<tr>
<td>Biswas and Bhatnagar (2013)</td>
<td>POS &gt; job and organization engagement &gt; organizational commitment, job satisfaction</td>
<td>Combined job and organization engagement measure; Saks (2006)</td>
</tr>
<tr>
<td>Malinen and Harju (2017)</td>
<td>POS &gt; job (volunteer) and organizational engagement &gt; volunteer satisfaction, affective commitment</td>
<td>Modified Saks (2006) measure</td>
</tr>
<tr>
<td>Sohrabizadeh and Sayfouri (2014)</td>
<td>Organizational – supervisory support &gt; work engagement &gt; OCB</td>
<td>Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006)</td>
</tr>
<tr>
<td>Rich et al., (2010)</td>
<td>POS &gt; job engagement &gt; OCB</td>
<td>Job Engagement Scale (JES; Rich et al., 2010)</td>
</tr>
</tbody>
</table>

*Note.* POS = Perceived organizational support. OCB = Organizational citizenship behavior (OCBI – Individual; OCBO – Organization).

In similar studies, perceived organizational support has served as a mediator for both outcomes of organizational citizenship behavior and job engagement separately. Specifically, human resource practice research has examined these relationships, and the context of organizational control should be identified (Wayne et al., 1997; Zhong, Wayne, & Liden, 2016). In consideration of the organizational work cognition, factors of distributive justice, growth, performance expectation, and procedural justice, employees evaluate to what degree the organization has control over these factors. Human resource practices can be likened to the organization, in addition to organizational leadership and the promulgated directional objectives. Employees assess organizational elements in consideration of their interests (Zigarmi et al., 2009). The understanding and feeling of being supported by the organization in the presence and reinforcement of engagement
promotes the intent to exhibit positive behaviors that are beneficial to the employee and organization.

Organizational Citizenship Behavior

Organ (1988) identified organizational citizenship behavior as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization” (p. 4). Altruism and generalized compliance form the foundation of the construct which extends organizational activities that include being helpful, cooperative, providing acts of goodwill, and other non-obligatory behaviors (Bateman & Organ, 1983; Smith, Organ, & Near, 1983). Positive states of mood contribute to prosocial gestures and behaviors that lead to exhibiting altruism, whereas negative states lead to a reduction in prosocial behaviors (Feigin, Owens, & Goodyear-Smith, 2018; Smith et al., 1983; Levin & Isen, 1975). Smith, Organ, and Near (1983) discussed the association between altruism and helping behaviors and the presence of positive mood states in which satisfaction mediated the relationship for altruism and leader supportiveness. Generalized compliance consists of conscientious performance for the benefit of the organization and is found to have a direct relationship with leader supportiveness (Smith et al., 1983). In addition to altruism and generalized compliance, Organ and Ryan’s (1995) meta-analysis examined the dimensions of civic virtue, courtesy, and sportsmanship, which highlight the association of OCB and job attitudes. Employee satisfaction factor statistics were found to load with leader supportiveness, perceived fairness, and organizational commitment (Organ & Ryan, 1995). Employees who were satisfied and supported were more likely to exhibit organizational citizenship behaviors. The reciprocation of positive exchanges between
the employees, management, and organization reinforce the conditions for exhibiting organizational citizenship behavior (Eisenberger et al., 1986; Kurtessis et al., 2017).

In seeking clarification of the construct, Organ (1997) identified challenges to delineating in-role and extra-role tasks for jobs that had little separation for what is considered going beyond the normal duties or when additional effort is expected. Contextual performance (Borman & Motwidlo, 1993) is synonymously identified as organizational citizenship behavior in which the construct captures the behavioral efforts that go beyond the organizational foundation while providing psychological and social support to the mechanisms that serve as the basis for the organizational foundation (Organ, 1997). The clarification included the idea that organizational citizenship behavior or contextual performance does not require discretionary behavior to be non-rewarded or considered extra-role but should contribute to maintaining or enhancing the context surrounding the work (Organ, 1997). In consideration of the nearly 30 different variations of organizational citizenship behavior and construct overlap, seven prominent dimensions have emerged, including organizational compliance, helping behavior, civic virtue, organizational loyalty, individual initiative, sportsmanship, and self-development (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Organizational citizenship behaviors are generally characterized as voluntary and selfless extra-role behaviors that benefit the interests of the organization.

Organizational citizenship behavior has been identified as a consequence of engagement and perceived organizational support and has served as an outcome in mediation studies (Chughtai & Buckley, 2009; Kurtessis et al., 2017; Moorman, Blakely, & Niehoff, 1998; Rhoades & Eisenberger, 2002). Macey and Schneider (2008) show
discretionary behaviors as being essential to organizational success even though they are not linked to the organizational reward system or considered part of the job. According to Podsakoff, MacKenzie, Paine, and Bachrach (2000), organizational citizenship behavior increases when employees are not indifferent to rewards, perceive their leaders to have control over the rewards, and perceive that rewards are based on performance. Employees reinforce social exchange principles early in the relationship, where unfairness or impropriety shifts the relationship toward economic terms and positive social interactions may preserve the personal relationship (Colquitt et al., 2001).

Organizational citizenship behaviors have shown positive associations with employee performance, efficiency, productivity, profitability, and the allocation of rewards, whereas a negative association has been associated with turnover intentions, actual turnover, absenteeism, unit turnover, and costs (Podsakoff, Whiting, Podsakoff, & Blume, 2009). These findings support the internalization of organizational citizenship behaviors as a facet of expected requirements in the workplace. Specifically, employees who feel that their job and organizational environment are distributively and procedurally fair and offer opportunities for growth, and who also judge that performance expectations create a sense of organizational support and organization engagement, are more likely to exhibit organizational citizenship behaviors (cf. Eisenberger et al., 1986; Kurtessis et al., 2017; Nimon & Zigarmi, 2015b; Saks, 2006; Zigarmi et al., 2009). The ongoing and interactive contributions of the individual and organization impact the relationship and the manifestation of outcomes.

Medical employees, both clinical and nonclinical, who go above and beyond their assigned duties provide a level of care and service that is often expected in the healthcare
environment. Medical coding professionals, or for that matter, healthcare workers who are engaged are more likely to provide service and assistance beyond their job duties, which is consistent with clinically and operationally excellent organizations (Kruse, 2015). Kruse (2015) offers examples of engaged healthcare employees who exhibit discretionary or organizational citizenship behaviors, citing that engaged healthcare employees make eye contact with all visitors, provide escorts to family members, consistently ensure hand washing and hygiene standards throughout the day, attentively listen and address family and patient concerns, ensure quality standards, work extra hours and shifts, and make fewer mistakes. The need to foster environments capable of supporting employee engagement and organizational citizenship behaviors is evident, particularly in the context of healthcare.

**Healthcare Transformation and Medical Coding Professionals**

The necessity of engaging patients in their healthcare has become vital to the mutually beneficial interests of healthcare organizations, their employees, and the individuals they serve. The volume-based business of healthcare has continued to transition to a quality-based and value-driven model with a focus on patient-centered care (Millen, 2015; Sharp & Fendrick, 2018). The increasing age and volume of healthcare consumers warrants additional efforts to improve the preventative capacity for healthcare organizations involving patients in their care. The treatment and education of patients extends beyond the clinical capacity where nonclinical personnel and technological shifts are placing a greater importance upon data and the consumer. Healthcare personnel who understand the delivery of health, the tools to facilitate patient engagement, and the
resources that are available are vital to the transformative efforts to improve population health (Millen, 2015).

Health information management (HIM) professionals are an example of a supportive nonclinical group that has the capacity to bridge a potential gap between a patient’s treatment and their access to education. In addition to assisting patients with vetted information relevant to their care and providing access to their online patient record, HIM professionals play an integral role in empowering patients to navigate and remain involved in the delivery of their care (Millen, 2015). The improvement of educational tools and interactive patient platforms has led to positive outcomes such as improved patient satisfaction measures, quality and safety standards, and improved operational efficiencies (Millen, 2015; Rowe, 2013). Patient engagement involves the efforts of clinical and nonclinical staff in identifying and mitigating any barriers to treatment or education to promote sustainable outcomes (Millen, 2015; Sharp & Fendrick, 2018).

Medical coders are a specific group of HIM professionals who examine medical notes and/or a diagnosis, health procedures, or medical services and convert the encounter into an alpha-numeric code for billing and classification (AAPC, 2018). The increasing demand for valuable data at the patient, organizational, national, and international levels has prompted an overhaul of the classification of the procedural and diagnostic codes used by medical coders (CDC, 2015). As of October 2015, medical coding professionals were required to transition from the International Classification of Diseases (ICD) 9th edition to ICD-10, which included 19 times more procedural codes (3,824 to 71,924) and 5 times more diagnostic codes (14,025 to 69,823; CDC, 2015). The
increase in medical codes improves the granularity of detail for classification and specificity of health conditions, the measurement and tracking of healthcare utilization, and the quality of care (CDC, 2015). In addition, the reporting of severity, laterality, and the complexity of disease conditions aids in the identification, tracking, and comparison across levels. The dramatic expansion of ICD codes prompted the immediate and ongoing need to develop and recruit personnel to meet the challenges of productivity and efficiency (AHIMA, 2014). Regulatory involvement and the ongoing transformation of healthcare has continued to shape efforts to approach patient health and engagement from a team perspective that is not limited to clinical and nonclinical resources (Millen, 2015; Sharp & Fendrick, 2018).

Studies of nonclinical and clinical healthcare professionals working in positive engagement environments have shown links to quality care, patient safety, and improved outcomes for patients (Lowe, 2012; Scotti et al., 2007). Healthcare organizations where employees report being healthy, engaged, and satisfied have seen higher rates of patient satisfaction measures, customer experience, and improved health (Lowe, 2012). This is fitting from a social exchange and social cognitive perspective. Employees who are in supportive environments in which they exhibit engagement as a result of the job or organization are more likely to go above and beyond for their co-workers, their organization, and the individuals they serve (cf. Eisenberger et al., 1986; Saks, 2006).

Similarly, patients who are supported in patient-centered environments, are more engaged in their treatment and are more likely to adhere to the clinical and nonclinical recommendations for improving their health. There have been no studies to date that have examined medical coders’ evaluation of organizational cognition and the perception
of organizational support and organization engagement regarding their exhibition of organizational citizenship behaviors. The prevalence of being supported and engaged provides promise for individuals going above and beyond what would be expected from a clinical, nonclinical, or patient perspective. The value of reciprocating positive individual and organizational contributions, and the outcomes associated with these contributions, is worthy of examination in the context of medical coding professionals in the United States.

**Research Hypotheses and Hypothesized Conceptual Model to be Examined**

The literature review provided context to the multiple frameworks of engagement, the multidimensional approach, support for modeling this study’s variables as a predictor, mediator, or criterion variable, and the applicability to healthcare and medical coding professionals. The three hypotheses used in this study are provided and discussed in this section.

Individuals form perceptions in the workplace that are shaped by social cognitive and social exchange principles that highlight the importance for key individual and organizational factors in the workplace (Rhoades, Eisenberger, & Armeli, 2001; Zigarmi et al., 2009). Employees perceive and value the structural components and goodwill found in the organizational environment. The thought and valuations attributed to the interaction between the contributions of the employee and organization are ongoing, and it is these valuations that influence employee behavior (Bandura, 1986). Employees are more likely to reciprocate positive effort and desirable organizational outcomes such as organizational citizenship behaviors when they feel valued by the organization and when their interests are represented (Kurtessis et al., 2017). In addition, employees value the
job and organization differently, and their level of engagement and the related favorable outcomes are reflective of this attribution (Saks, 2006).

Organizations and employees bear reciprocal responsibility for the psychological and environmental conditions that facilitate perceptions of organizational support, organization engagement, and desirable outcomes (cf. Bandura, 1986; Eisenberger et al., 1986; Gouldner, 1960; Saks, 2006). The maximization of perceived organizational support and organization engagement are integral in mutual outcomes, as employees and organizations contribute to the workforce environment quite basically in the form of inputs and outputs. The fulfillment of mutual outcomes in the employee and organizational relationship can proceed beyond mechanistic terms when the relationship is valued by all parties. The reciprocal exchange between effort and outcomes is complimentary to the interaction recognized by the employee’s internal and external environment (Bandura, 1986; Blau, 1964).

Organizational cognition makes up the second order construct comprised of the first order constructs as identified (Nimon & Zigarmi, 2015b). Employees make valuations of the workplace environment, which informs their intentions, and behaviors (Zigarmi et al., 2009). Organizational environments that are identified as being supportive, contribute to an employee’s willingness to reciprocate their efforts on behalf of the organization (Eisenberger et al., 1986). Employee’s value working environments that are distributively and procedurally just, have growth opportunities, with specified performance expectations (Nimon & Zigarmi, 2015b).

In their meta-analysis, Kurtessis, Eisenberger, Ford, Buffardi, Stewart, and Adis, (2017), provided empirical support for the first order factors of distributive justice,
procedural justice, and variations of growth and performance expectations as intervened by perceived organizational support. In addition, perceived organizational support has been modeled as an antecedent to measures of engagement (Rich, Lepine, Crawford, 2010; Saks, 2006). Furthermore, studies have shown support for modeling distributive justice, procedural justice, developmental opportunities, and in-role behaviors as resources with measures of engagement (Bakker & Bal, 2010; Bakker, Schaufeli, Leiter, & Taris, 2008; Saks, 2006; Schaufeli, Taris, & Bakker, 2006). Organizational cognition makes a unique contribution to perceived organizational support, as employees assess and value specific workplace factors they attribute their feelings to the organization (cf. Eisenberger et al., 1986; Zigarmi et al., 2009). In similar fashion, employees’ evaluation of organizational cognition influences their identification or exhibition of engagement (cf. Nimon & Zigarmi, 2015b; Zigarmi, Nimon, Houson, Witt, & Diehl, 2011; Zigarmi et al., 2009). This study draws upon previous research and theoretical support for the ongoing exchanges that take place between the employee and organization relationship (Bandura, 1986; Gouldner, 1960).

H1: Organizational cognition has an indirect effect on organization engagement through perceived organizational support, while controlling for the direct effect of organizational cognition on organization engagement.

In support of the relationship identified between organizational cognition and organization engagement, this summary examines the relationship between organization engagement and organizational citizenship behaviors. Saks (2006) modeled job and organization engagement as mediators with the outcome of organizational citizenship behaviors. The contention was that employees engaged differently towards their job and
organization and the organizational citizenship behaviors they exhibited was directed toward the individual and organization. Employees would essentially go above and beyond their assigned duties or display citizenship behaviors when they were considered to be engaged (Saks, 2006).

Since Saks’ study, there have been no studies that have modeled organization engagement as a mediator to organizational citizenship behaviors, although other measures of engagement have examined this relationship (Rich et al., 2010; Sohrabizadeh & Sayfouri, 2014). Rich, Lepine, and Crawford (2010) modeled the mediator job engagement with organizational citizenship behaviors and Sohrabizadeh and Sayfouri (2014) modeled work engagement with organizational citizenship behaviors. Employees are more willing to step outside of their defined roles and act in the interests of the organization when they are engaged (Rich et al., 2010). Organization engagement as utilized as an intervening variable in this study examines employees’ focus beyond the job or work role. Employees evaluate the environmental factors in the workplace, which facilitates their engagement and willingness to go above and beyond their assigned duties (Saks, 2006).

\textit{H2: Organizational cognition has an indirect effect on employee exhibition of OCBs through organization engagement, while controlling for the direct effect of perceived organizational support on organization engagement.}

In keeping with the support provided for hypotheses 1 and 2, hypothesis 3 builds upon these by including a multi-step intervening pathway. Organizational cognition as presented provides a basis for employees to assess and value key components within an organization. The benefit of a multi-dimensional model of engagement relies upon the
contributions from other fields, disciplines, and domains for consideration. The intervening variables of perceived organizational support and organization engagement provide a platform for employee’s to evaluate the workplace environment using organizationally centric indicators.

The support for organizational cognition on employee intentions as mediated by job well-being (work engagement) is drawn from employee work passion research. The quantitative field test of employee work passion provided support for the mediation of work cognitions on employee intent to exhibit behaviors (Zigarmi et al., 2011). In addition, the organizational cognition scale with the first order factors of distributive justice, growth, performance expectations, and procedural justice was developed during the construction of the revised work cognition inventory (WCI-R; Nimon & Zigarmi, 2015b). Furthermore, the employee intent to exhibit organizational citizenship behavior scale was conceived as part of the work intention inventory development (Zigarmi et al., 2012), to be in keeping with previous conceptual rationale for work intentions, and in support of the connection between intentions and behavior, and the frequency and magnitude of correlations for antecedents and consequences found in the literature (Nimon et al., 2015a). Employees evaluate their working environment and when they perceive the organization cares for their well-being, they are more likely to reciprocate in the form of effort on behalf of the organization (Eisenberger et al., 1986).

Examining the components of perceived organizational support and organization engagement as intervening variables in a multidimensional study deserves further attention. Employees who believe their supervisor and their organization supports their well-being had a complete indirect effect on organizational citizenship behaviors through
job well-being (Sohrabizadeh & Sayfouri, 2014). Sohrabizadeh and Sayfouri (2014) provided a combined measure of support concerning the supervisor and organization as mediated by the measure of job well-being (work engagement). Meta-analytic support has been shown for modeling perceived organizational support as a mediator to the identified or like constructs of the first order factors that make up organizational cognition, in addition to the outcome of organizational citizenship behaviors (Kurtessis et al., 2017). Several studies have modeled antecedents and outcomes of both job and organization engagement with the use of various instruments (Biswas & Bhatnagar, 2013; Lee, Choi, Moon, & Babin, 2014; Malinen & Harju, 2017; Saks, 2006). Similarly, the examination of job well-being (work engagement) has been shown to predict organizational citizenship behaviors (Krishnan et al., 2013; Shantz, Alfes, Truss, & Soane, 2013; Sohrabizadeh & Sayfouri, 2014).

The identification of engagement related toward the organization vice the job in concert with the perceived organizational support extends existing engagement research (Rich et al., 2010; Saks, 2006; Zigarmi et al., 2011). In addition, the path from perceived organizational support as mediated by engagement or job well-being and the outcome of organizational citizenship behavior has received support in engagement research (Rich et al., 2010; Saks, 2006; Sohrabizadeh & Sayfouri, 2014). The distinction for the measures for engagement and job well-being is identified, as Rich, Lepine, and Crawford (2010) utilized the cognitive, affective, and physical components of their engagement instrument to mediate perceived organizational support and organizational citizenship behaviors. In addition, the Sobel (1982) test was utilized in calculating the unstandardized indirect effect. Saks (2006) utilized the Baron and Kenny (1986) approach in examining
perceived organizational support as mediated by job and organization engagement on the outcome of organizational citizenship behaviors. This study draws upon key literature in examining organizational cognition as intervened by the serial intervening variables of perceived organizational support and organization engagement on organizational citizenship behaviors (cf. Kurtessis et al., 2017; Rich et al., 2010; Saks, 2006; Zigarmi et al., 2011; Nimon & Zigarmi, 2015b). In addition, the phantom model approach was utilized to specify bootstrapped unstandardized direct and indirect effects, standard errors, and confidence intervals (Macho & Ledermann, 2011; Perera, 2013).

*H3. Organizational cognition has an indirect effect on employee exhibition of OCBs through perceived organizational support then organization engagement while controlling for the direct effect from organizational cognition on organization engagement.*

*Figure 2. Conceptual Model of Hypothesized Relationships*
Chapter Summary

Researchers, practitioners, and organizations alike have disagreed on a definition, conceptualization, and operationalization of employee engagement (Schaufeli, 2012; Shuck et al., 2017). The examination of the employee and organization relationship in the context of the social cognitive theory and social exchange theory provides insight into the psychological, environmental, and behavioral determinants that are interactive and considerate of positive exchanges and goodwill (Bandura, 1986; Gouldner, 1960). Studies rooted in the multidimensional framework can aptly accommodate the exchanges in the employee and organization relationship (cf. Saks, 2006; Shuck & Wollard, 2010; Zigarmi et al., 2009). Organizational cognition identified as distributive justice, procedural justice, growth, and performance expectations belong to the higher order construct of work cognition, which incorporates valuations involving the interaction of psychological and environmental factors (Nimon & Zigarmi, 2015b). Employees engage differently regarding aspects of the job and organization (Saks, 2006). Those employees who perceive that their contributions are valued on the job and as a result of the organization as a whole intend to exhibit mutually beneficially behaviors (Eisenberger et al., 1986; Zigarmi et al., 2009).

Perceived organizational support (POS) has been modeled as a mediator or outcome of the factors that make up organizational cognition, serves as a predictor or antecedent to several engagement measures, and has been modeled as with the outcome of organizational citizenship behavior (Kurtessis et al., 2017; Rich et al., 2010; Saks, 2006; Sohrabizadeh & Sayfouri, 2014). Similarly, organizational citizenship behavior has been identified as a consequence of perceived organizational support and work
engagement and has served as an outcome in several mediation studies (Chughtai & Buckley, 2009; Kurtessis et al., 2017; Moorman et al., 1998; Rhoades & Eisenberger, 2002). This study seeks to identify the inseparability of the employee and organization relationship, similar to the interactive nature of the social cognitive determinants and the reciprocal social exchanges found in the workplace, by modeling perceived organizational support and organization engagement as intervening variables. In addition, engagement studies that explicitly acknowledge the employee and organization relationship by considering individual cognitions, organizational support contributions, and mutually beneficial outcomes may approach operationalization.

The use of a multidimensional model to examine organizational cognition as intervened by perceived organizational support and organization engagement to exhibit organizational citizenship behaviors answers the call to examine engagement from a domain that extends beyond the job, to examine exchange components of the employee and organization relationship using multi-step modeling, and to examine interactive psychological and environmental factors involved in engagement (Kurtessis et al., 2017; Preacher & Hayes, 2008; Saks, 2006; Saks & Gruman, 2014; Zigarmi et al., 2011) in the context of medical coding professionals in the United States.
Chapter 3 – Design and Method

Introduction

This chapter describes the design and method components used in this study. The sections included in this chapter are purpose of the study, research hypotheses, design of the study, population and sample, instrumentation, survey design, data collection procedures, data analysis procedures, and limitations. This chapter concludes with a summary.

Purpose of the Study

Informed by the social cognitive (Bandura, 1986) and social exchange theory (Blau, 1964), this study examined employees who cognitively assess and value their working environment and resultantly exhibit behaviors that are mutually beneficial to the employee and organization relationship. Employees’ cognitive valuations of their workplace environment contribute to their exhibition of organizational citizenship behaviors (Rich et al., 2010; Saks, 2006; Shuck et al., 2014). This study utilized a multidimensional approach (Shuck, 2011) in modeling organizational cognition (predictor), using the intervening variables of perceived organizational support and organization engagement, on medical coders’ exhibition of organizational citizenship behaviors (outcome) in the United States. Examining cognitions in the context of healthcare provides a psychological glimpse into the process medical employees undergo in the interest of themselves and others, where their behaviors may be impacted by the strength of their relationships or valuation of organizationally centric indicators.
Research Hypotheses

The use of employee cognitions and organizationally oriented measures provides an avenue for focusing beyond job elements to highlight the employee and organization exchange relationship (Kurtessis et al., 2017; Saks, 2006), which requires ongoing dialogue. The acknowledgement of an employee’s cognitive valuations, the presence of positive perceptions of organizational support and organization engagement, reinforces desired outcomes. Prior to the multidimensional framework, the engagement gap between researchers and practitioners was filled with challenges (Shuck & Wollard, 2010; Zigarmi et al., 2009). The following hypotheses seek to provide support for a multidimensional model that utilizes social cognitive and social exchange principles to examine an operationalization of perceived organizational support and organization engagement that considers individual and organizational contributions, albeit real or perceived:

**H1:** Organizational cognition has an indirect effect on organization engagement through perceived organizational support while controlling for the direct effect of organizational cognition on organization engagement.

**H2:** Organizational cognition has an indirect effect on employee exhibition of OCBs through organization engagement while controlling for the direct effect of perceived organizational support on organization engagement.

**H3:** Organizational cognition has an indirect effect on employee exhibition of OCBs through perceived organizational support then organization engagement while controlling for the direct effect from organizational cognition on organization engagement.
Design of the Study

The cross-sectional survey design examined single and multi-step intervening hypotheses involving the predictor variable of organizational cognition (related to the first-order factors—distributive justice, growth, performance expectation, and procedural justice), the intervening variables of perceived organizational support and organization engagement, and the outcome variable of organizational citizenship behavior. The use of the term “mediation” is for convenience, considering that this study is cross-sectional by design and the paths are more appropriately referred to as intervening pathways (cf. Kline, 2016). The a priori design is theoretically based and quantitative measurement is used to examine the relationships between the identified constructs (Bryman & Bell, 2015). In addition to the call for examining psychological and environmental factors in engagement and the necessity for robust models, the examination of perceived organizational support and organization engagement as intervening variables provided insight into the contributions and valuations of the employee and organization relationship using organizationally oriented factors (Kurtessis et al., 2017; Saks, 2006; Saks & Gruman, 2014).

Statistical significance (p < .05) and practical significance (w ≥ .10) thresholds are identified for use within this study (Cohen, 1988; Ellis & Steyn, 2003). Cohen’s w is provided to assess the practical significance of this study’s sample population when compared to nationally compiled BLS data. An effect size of .10 satisfies the lower threshold as indicated by Cohen (1988) for the presence of an effect. In addition, statistically significant direct and indirect effect estimates were interpreted for practical significance using a threshold consistent with Cheung (2009). In deference to Kline
(2004), effect sizes should be tentatively interpreted, as establishing rules or guidelines for effects are susceptible to error. Specifically, an abundance of empirical research in a particular field and meta-analytic support are needed to establish effect guidelines (Cheung, 2009; Kline, 2004). This study will examine effect sizes against the .14 lower threshold per Cheung (2009). In consideration of indirect effects, a unit increase in the predictor (organizational cognition) impacted the outcome (organizational citizenship behaviors) variable by the value of the given effect indirectly through the intervening variables (cf. Preacher & Hayes, 2008; Preacher & Kelley, 2011).

**Population and Sample**

The population in this study was made up of full-time medical coding employees who work in healthcare across the United States. A sample frame is identified as a list of the units of a population from which a sample is to be selected (DiGaetano, 2013). The sample frame in this study consists of medical coding professionals who have been recruited via email distribution as being a current or past member of one of five state associations of the American Health Information Management Association (AHIMA). The American Health Information Management Association (AHIMA) is a national organization with a membership of 103,000 persons and representation in 52 affiliated state component associations (AHIMA, 2018). The mission and membership of AHIMA aim to improve health quality and outcomes by serving as leaders in the management of medical records and health data (AHIMA, 2018). The five associations included 10,000 credentialed medical coding members from the states of Georgia, Louisiana, Michigan, North Carolina, and South Carolina (AHIMA report, 2018). The sample included full-time workers holding the following credentials: Registered Health Information
Administrator (RHIA), Registered Health Information Technician (RHIT), Certified Coding Specialist (CCS), Certified Coding Specialist Physician Based (CCS-P), Certified Coding Associate (CCA), Certified Documentation Improvement Practitioner (CDIP), and Certified Health Data Analyst (CHDA).

The availability of the sample was dependent upon AHIMA and the email distribution list used to target credentialed medical coding employees in five U.S. states. Medical coding employees are identified as being nested within hospitals, clinics, ambulatory settings, physician practices, and other entities in support of improving healthcare data and patient quality outcomes. To preserve the anonymity of participants, the primary job setting was not specified beyond these categories (Podsakoff et al., 2003). Medical coding professionals were chosen because their organizational contributions are integral and valued alongside clinical professionals in achieving quality care and operational excellence in healthcare. In addition to the vital role nonclinical personnel play in regards to patient satisfaction metrics, the Bureau of Labor Statistics projects that health information job growth will exceed all other occupations through the year 2026 (BLS, 2018). The focus of this study was the recruitment of medical coding professionals who work in the U.S., are 18 years of age and older, and work 40 or more hours during the week. The collection of additional demographics assisted in ensuring the representativeness of the sample data (Bryman & Bell, 2015). This study identified the difference in the positional hierarchy for managers and supervisors and nonmanagers, as the perception of organizational support and organization engagement may be reflective of this hierarchy and thus worthy of analysis.
In January of 2018, the healthcare and social assistance sector was represented by 12.1% supervisors and 87.9% nonsupervisory employees. The annual table detailing occupations by ethnicity and gender specified that medical records and health information technicians are composed of 91.7% women, 74.6% White, 13.2% Black or African American, 6.9% Asian, and 9.8% Hispanic or Latino employees (BLS, 2017). In addition, medical records and health information technicians primarily worked in hospitals (36.4%) or in ambulatory settings, clinics, or physician offices (27.8%), while the remainder were in settings such as educational, government, or consultative roles (BLS, 2018). Occupational wage estimates for medical records and health information technicians at the 10th percentile is $25,810, the 50th percentile is $39,180, and the 90th percentile is $64,610 (BLS, 2017). The demographic data were compiled and chi-square tests were used to assess independence of the categorical variables and the representativeness between the collected sample and population, see Table 3. Statistical significance was established at $p \leq .05$, and practical significance was established at $w \geq .10$ (Cohen, 1988; Ellis & Steyn, 2003). In keeping with Cohen (1988), effect sizes are classified as small (.1), medium (.3), and large (.5) in examining practical significance. Statistical and practical significance will provide insight as to this study’s sample representativeness when compared to national BLS data.
Table 3

*Population Demographics*

<table>
<thead>
<tr>
<th>Health Information / Medical Records Professionals (BLS, 2017; 2018)</th>
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<tbody>
<tr>
<td>Gender</td>
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<td>Male</td>
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<td>Female</td>
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<td>Ethnicity</td>
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<td>Supervisor/Manager</td>
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<td>Non-manager</td>
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<tr>
<td>Job Setting</td>
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<tr>
<td>Hospital</td>
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<tr>
<td>Health Clinic / Ambulatory / Private practice</td>
</tr>
<tr>
<td>Other</td>
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<tr>
<td>Salary</td>
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<tr>
<td>&lt; $25,810</td>
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<tr>
<td>&lt; $39,180</td>
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<tr>
<td>&gt; $64,610</td>
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*Note.* BLS = Bureau of Labor Statistics; Gender and ethnicity data sourced from BLS Annual Table, 2017; Level data sourced from BLS Sector, 2018; Job setting sourced from BLS Occupational Code, 2018; Salary sourced from BLS Occupational Wages, 2017.

This study collected a sample size in accordance with the structural power requirements of a multi-step hypothesized model. Monte Carlo simulation (Muthén & Muthén, 2002) was used, and this study’s estimated direct and indirect structural paths were modeled accordingly (see the script in Appendix B). The first-order factor loadings for organizational cognition (> .70, Nimon & Zigarmi, 2015b), perceived organizational support (.71 - .84; Rhoades et al., 2001), and organization engagement (> .75; Saks, 2006) were identified, and the conservative value of .65 was utilized for all variables. The residual factor variance value of .5775 was set for the four first-order factors of
organizational cognition (see Figure 3). This value was obtained by squaring the .65 factor loading and then subtracting it from 1.

![Diagram of Structural Path Values Model](image)

*Figure 3. Structural Path Values Model*

*Note.* DJ = Distributive justice; PJ = Procedural justice; GR = Growth; PE = Performance expectation; OC = Organizational cognition; POS = Perceived organizational support; OE = Organization engagement; OCB = Organizational citizenship behaviors.

Correlation coefficients for the first-order factors of growth ($r = .50$; Kurtessis et al., 2017), performance expectations ($r = .19$; Kurtessis et al., 2017), distributive justice ($r = .45$; Colquitt et al., 2013), and procedural justice ($r = .51$; Colquitt et al., 2013) in relation to perceived organizational support were utilized in establishing an average correlation value of .41 for organizational cognition to perceived organizational support. In addition, the correlation coefficient between perceived organizational support and organization engagement ($r = .58$; Saks, 2006), was utilized. Distributive justice ($r = .51$; Ghosh et al., 2014), procedural justice ($r = .41$; Saks, 2006), and the estimated correlation coefficients for growth ($r = .44$) and performance expectation ($r = .44$) in relation to organization engagement were also used to establish the average coefficient value of .45
for organizational cognition to organization engagement for the power analysis. In addition, the correlation coefficient for organization engagement to organizational citizenship behaviors \( (r = .42; \text{Saks, 2006}) \) was utilized. The correlation coefficients pertaining to organizational cognition and perceived organizational support \( (r = .41) \), perceived organizational support and organization engagement \( (r = .58) \), and organizational cognition to organization engagement \( (r = .45) \) were used to calculate beta weights.

The path coefficient from organizational cognition to organization engagement was calculated using the relevant correlations \( (\beta = .26 = ((r_{OC,OE}.45) - (r_{POS,OE} .58) * r_{OC,POS} .41)) / (1-.41^2)) \), in accordance with Thompson (2006, p. 235). In addition, the path coefficient from perceived organizational support to organization engagement \( (\beta = .48 = ((r_{POS,OE} .58) - (r_{OC,OE} .45) * r_{OC,POS} .41)) / (1-.41^2)) \) was calculated (Thompson, 2006, p. 235). The standardized path coefficients and correlation coefficients were used to calculate indirect effects for this study’s hypotheses. The indirect effect of 0.083 \( (r_{OC,POS} [0.41] * \beta_{POS,OE} [0.48] * r_{OE,OCB} [0.42]) \) accounted for the path from organizational cognition to organizational citizenship behaviors through perceived organizational support, and the indirect effect of 0.109 \( (\beta_{OC,OE} [0.26] * r_{OE,OCB}[0.42]) \) accounted for the path from organizational cognition to organizational citizenship behaviors through organization engagement. These values were included in the power analysis. In accordance with Wolf, Harrington, Clark, and Miller (2013), factor means and indicator intercepts were set to the value of zero, and 10,000 replications were used.

The squared correlation and multiple correlation coefficients were utilized to calculate the residual error values (see Figure 3). The squared correlations were
subtracted from 1 to obtain the residual error values for perceived organizational support (.832; 1 – 0.41²) and organizational citizenship behavior (.824; 1 – 0.42²). The product measure (Pratt, 1987), which partitions the regression effect, was used to calculate the Multiple R² and this value was subtracted from 1 to obtain the residual factor variance for organization engagement (Nathans, Oswald, & Nimon, 2012). The residual factor value for organization engagement is provided (.605; 1 - R² = .395; (ᵣ_{POS,OE} [.58] * β_{POS,OE} [.48]) + (ᵣ_{OC,OE} [.45] * β_{OC,OE} [.26]), respectively.

In consideration of the Monte Carlo simulation conducted, it was determined that 305 participants would be sufficient to assess this study’s hypotheses beyond a .80 power threshold with 95% confidence, as there were no identified errors or bias (see Table 4). Attention is paid to the last four columns of Table 4 in order to satisfy established bias parameters consistent with Muthén and Muthén (2002). The column listed as “% Sig. Coeff. Power” provides the established value for power (> .80). The column listed as “Parameter Estimates” baselines the parameter estimate against the population estimate. In similar fashion, the column listed as “Degree in the Std. Err. Est.” compares the standard error average against the standard deviation so that the error bias does not exceed 5%. In addition, the parameter and error biases should not exceed 10% for any model parameter (Muthén & Muthén 2002). Furthermore, the column listed as “95% CI in Parameter Est.” identifies the coverage which proportions the replications in that the 95% confidence interval contains the parameter value.
Table 4

Complete Factor Loadings, Higher Order Structural Path Analysis – Monte Carlo Simulation (N = 305)

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<tbody>
<tr>
<td>305</td>
<td>F1 BY A1</td>
<td>0.650</td>
<td>0.645</td>
<td>0.083</td>
<td>0.080</td>
<td>0.007</td>
<td>0.947</td>
<td>1.000</td>
<td>0.723</td>
<td>2.545</td>
<td>0.947</td>
</tr>
<tr>
<td>305</td>
<td>F1 BY A2</td>
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<td>0.645</td>
<td>0.081</td>
<td>0.080</td>
<td>0.007</td>
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<td>1.000</td>
<td>0.846</td>
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<td>F1 BY A3</td>
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<td>0.645</td>
<td>0.082</td>
<td>0.080</td>
<td>0.007</td>
<td>0.950</td>
<td>1.000</td>
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<td>F2 BY B1</td>
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<td>0.082</td>
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<td>0.080</td>
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<td>0.650</td>
<td>0.645</td>
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<td>0.949</td>
<td>1.000</td>
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<td>0.062</td>
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<td>0.948</td>
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<td>1.122</td>
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<td>0.666</td>
<td>0.132</td>
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<td>0.132</td>
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<td>0.958</td>
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<td>0.078</td>
<td>0.006</td>
<td>0.951</td>
<td>1.000</td>
<td>0.095</td>
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<td>0.264</td>
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<td>0.008</td>
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<td>0.007</td>
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<td>0.646</td>
<td>0.123</td>
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<td>0.413</td>
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<td>0.085</td>
<td>0.007</td>
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</tr>
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<td>0.000</td>
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<td>1.101</td>
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F1, indicators A1 – A3 = Distributive Justice; F2, indicators B1 – B3 = Procedural Justice; F3, indicators C1 – C3 = Growth; F4, indicators D1 – D3 = Performance Expectations; F5, indicators F1 – F4 = Organizational Cognition; F6, indicators E1 – E8 = Perceived Organizational Support; F7, indicators S1 – S6 = Organization Engagement; F8, indicators G1 – G4 = Organizational Citizenship Behaviors
**Instrumentation**

The 38-item survey (see Appendix C) was distributed to 10,000 potential participants, and a target of 350 responses was sought in order to exhibit high power and adequate sample size consistent with research recommendations (Wolf et al., 2013). Used in this study were the 12-item organizational cognition (Nimon & Zigarmi, 2015b) scale comprised of the four 3-item subscales of distributive justice, growth, performance expectation, and procedural justice; the 8 attitudes toward the color blue items (Miller & Chiodo, 2008), which served as a marker variable using the confirmatory factor analysis (CFA) marker technique (Williams et al., 2010) to examine common method variance; the 8-item perceived organizational support (POS; Rhoades et al., 2001) scale; the 6-item organization engagement (Saks, 2006) scale; and the 4-item organizational citizenship behavior as directed toward the organization (Saks, 2006) scale (see Appendix D).

**Organizational Cognition** (Nimon & Zigarmi, 2015b). The organizational cognition scale was developed as part of the Work Cognition Inventory Revised (WCI-R) scale, a 36-item scale made up of 12 first-order factors related to one of three second-order factors (job-cognition, organizational-cognition, people-cognition), and those were related to the third-order factor of work-cognition (Nimon & Zigarmi, 2015b). The 36-item revised work cognition scale, which includes the second-order organizational cognition scale, had a composite reliability range of .82 - .95 and an average variance extracted range of .62 - .87, which is indicative of adequate reliability and convergent validity for the first-order factors (Hair, Black, Babin, & Anderson, 2010; Nimon & Zigarmi, 2015b). The pattern coefficient values for the second-order organizational cognition scale and first-order sub-scales as evidenced in Nimon and Zigarmi (2015b)
had values above .60, thus exhibiting an appropriate measurement structure, and the
structure coefficients correlated best with their appropriate theoretical factor. The higher
order factor model fit the data reasonably well, and showed convergent validity
coefficient support with a range of .63 - .86, with the exception of the distributive justice
scale scores, where the discriminant validity coefficients range was reported as - .09 - .25
(Nimon & Zigarmi, 2015b). The 12-item second-order organizational cognition scale
was used in this study, which consists of the following 4 subscales of distributive justice,
procedural justice, growth, and performance expectations:

**Distributive Justice** (Nimon & Zigarmi, 2015b). The 3-item first-order
distributive justice scale is one of four subscales that make up the second-order
organizational cognition scale used in this study (Nimon & Zigarmi, 2015b). An example
item included *My hard work will usually result in fair payback*. The measure utilizes a 6-
point Likert scale that addresses the first-order factors and includes the anchors 1
indicating *To no extent* and 6 indicating *To the fullest extent* (Nimon & Zigarmi, 2015b).
Nimon and Zigarmi (2015b) provided evidence for the reliability, convergent validity,
and discriminant validity of the distributive justice scale. Refinement of the WCI-R as
evidenced in study 2, showed distributive justice to have a coefficient alpha of .91.
Additionally, scale scores of the WCI-R were correlated with conceptually similar scales
to assess convergent validity. Scale scores from Parker, Baltes, and Christiansen (1997)
was shown to share more variance with WCI-R growth ($r^2 = .37$) than WCI-R distributive
justice ($r^2 = .36$). The delta $R^2$ coefficient (-.05) was reported as a measure of
discriminant validity, which was calculated by regressing the WCI-R scales and the
validity scales on two measures of employee affect to determine whether the WCI-R
scales shared more or less variance with the measures of employee affect than with the validity scales (Nimon & Zigarmi, 2015b). The negative coefficient signaled that the WCI-R scales had less variance in common with employee affect than did validity scales (Nimon & Zigarmi, 2015b).

**Procedural Justice** (Nimon & Zigarmi, 2015b). The 3-item first-order procedural justice scale is one of four subscales that make up the second-order organizational cognition scale used in this study (Nimon & Zigarmi, 2015b). An example item included *Decisions, policies, and procedures are fairly and consistently applied to all*. The measure utilizes a 6-point Likert scale that addresses the first-order factors and includes the anchors 1 indicating *To no extent and 6 indicating To the fullest extent* (Nimon & Zigarmi, 2015b). Nimon and Zigarmi (2015b) reported a coefficient alpha of .89 in study 2 for procedural justice. In addition, the convergent validity coefficient of .69 was reported by assessing the measure’s scale scores with the distributive justice scale found in Parker, Baltes, and Christiansen (1997). The delta R² coefficient (−.02) was reported as a measure of discriminant validity, which was calculated by regressing the WCI-R scales and the validity scales on two measures of employee affect to determine whether the WCI-R scales shared more or less variance with the measures of employee affect than with the validity scales (Nimon & Zigarmi, 2015b). The negative coefficient signaled that the WCI-R scales had less variance in common with employee affect than validity scales (Nimon & Zigarmi, 2015b).

**Growth** (Nimon & Zigarmi, 2015b). The 3-item first-order growth scale is one of four subscales that make up the second-order organizational cognition scale used in this study (Nimon & Zigarmi, 2015b). An example item included *This organization offers*
me options for discussing my future developments needs and interests. The measure utilizes a 6-point Likert scale that addresses the first-order factors and includes the anchors 1 indicating *To no extent and 6 indicating To the fullest extent* (Nimon & Zigarmi, 2015b). Nimon and Zigarmi (2015b) reported a coefficient alpha of .89 in study 2 for growth. In addition, the convergent validity coefficient of -.70 was reported by assessing the measure’s scale scores with the career development scale from Ivancevich and Matteson (1980). The delta R² coefficient (.01) was reported as a measure of discriminant validity, which was calculated by regressing the WCI-R scales and the validity scales on two measures of employee affect to determine whether the WCI-R scales shared more or less variance with the measures of employee affect than with the validity scales (Nimon & Zigarmi, 2015b). The positive coefficient signaled that the WCI-R scales had more variance in common with employee affect than did the validity scales (Nimon & Zigarmi, 2015b).

**Performance Expectations** (Nimon & Zigarmi, 2015b). The 3-item first-order performance expectations scale is one of four subscales that make up the second-order organizational cognition scale used in this study (Nimon & Zigarmi, 2015b). An example item included *I know the minimum acceptable output levels for my work.* The measure utilizes a 6-point Likert scale that addresses the first-order factors and includes the anchors 1 indicating *To no extent and 6 indicating To the fullest extent* (Nimon & Zigarmi, 2015b). Nimon and Zigarmi (2015b) reported a coefficient alpha of .90 in study 2 for performance expectations. In addition, the convergent validity coefficient of -.52 was reported by assessing the measure’s scale scores with the role ambiguity scale from Ivancevich and Matteson (1980). The delta R² coefficient (-.09) was reported as a
measure of discriminant validity, which was calculated by regressing the WCI-R scales and the validity scales on two measures of employee affect to determine whether the WCI-R scales shared more or less variance with the measures of employee affect than with the validity scales (Nimon & Zigarmi, 2015b). The negative coefficient signaled that the WCI-R scales had less variance in common with employee affect than validity scales (Nimon & Zigarmi, 2015b).

Attitudes Toward the Color Blue (Miller & Chiodo, 2008). The attitudes toward the color blue scale (ATCB) is an 8-item scale utilized as an unrelated measure to assess for common method variance (Miller & Chiodo, 2008; Podsakoff et al., 2003), as the measure is deemed unrelated to the substantive variables in this study. The ATCB scale, uses a 7-point Likert scale that is anchored by *strongly disagree* and *strongly agree*. In accordance with Williams, Hartman, and Cavazotte (2010), the ATCB was modeled as a marker variable as the measure has been supported in this capacity (Simmering, Fuller, Richardson, Ocal, & Atinc, 2015). Sample items include *I like the color blue* and the reverse coded item *I really don’t like the color blue* (Miller & Chiodo, 2008). The ATCB measure had a reported coefficient alpha of .86 (Miller & Chiodo, 2008).

Perceived Organizational Support (Eisenberger et al., 1997). The perceived organizational support scale consists of 8 highly loading items from the original 36-item SPOS (Eisenberger et al., 1986). The perceived organizational support measure utilizes a 7-point Likert scale, with 1 indicating *strongly disagree* and 7 indicating *strongly agree*, measures employee perceptions that the organization cares for their contributions and general well-being, and examples included *My organization really cares about my well-
being; and My organization is willing to help me if I need a special favor (Eisenberger et al., 1986). The seminal study reported coefficient alpha values of .97 and .93 (Eisenberger et al., 1986), and the Eisenberger, Cummings, Armeli, and Lynch (1997) study reported a coefficient alpha of .90. Principal component analysis revealed a single factor accounting for 48% of the variance (Eisenberger et al., 1986). Confirmatory factor analyses provided support for a single-factor model, and the SPOS was empirically and conceptually distinct from affective and continuance commitment; however, the distinction with satisfaction was less clear, although POS is situated as a cognitive assessment, where satisfaction is situated as an affective reaction (Shore & Tetrick, 1991). Further confirmatory factor analyses identified perceived organizational support to be strongly related, but to be a distinct factor from job satisfaction (Eisenberger et al., 1997). In their meta-analysis, Rhoades and Eisenberger (2002) pointed out the scale’s unidimensionality, internal reliability, and association and distinctiveness to numerous constructs. Lynch, Eisenberger, and Armeli (1999) discussed several studies where confirmatory factor analysis supported the unitary factor structure of the 8-item POS survey in addition to a high internal reliability (coefficient alpha of .90).

**Organization Engagement** (Saks, 2006). The 6-item organization engagement scale was utilized to differentiate the engagement medical coders’ exhibit in relation to their organization. The scale focused on an employee’s psychological presence in the organization, was reported to have a coefficient alpha of .90 (Saks, 2006) in support of unidimensionality, and utilizes a 5-point Likert scale, with 1 indicating *strongly disagree* and 5 indicating *strongly agree*, with items such as *I am highly engaged in this organization* and *Being a member of this organization is exhilarating for me*. Principal
component analysis with a promax rotation was utilized to identify the two factor structure corresponding to job and organization engagement, where all six items loaded higher than .75 and all cross-factor loadings were less than .30 (Saks, 2006). Ellinger, Musgrove, and Ellinger (2012) examined the relationships between employee engagement (Saks, 2006), development, and service climate and reported intercorrelations and the square roots of the average variance extracted (AVE). In their study, each latent factor provided average variance that was accounted for by its indicators above .50, which is indicative of convergent validity (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Discriminant validity was evidenced by the shared variance of any two variables that was less than the average variance reported. The values of organization engagement (AVE = .80), and the intercorrelations of organization engagement and informal coaching (.53), with formal training (.41), and with job engagement (.66) are reported (Carrell, 2018; Ellinger et al., 2012).

**Organizational Citizenship Behavior** – Organization (OCB-O, Saks, 2006). The 4-item organizational citizenship behavior scale (Saks, 2006) originated from Lee and Allen’s (2002) study, where a confirmatory factor analysis showed an empirical distinction between OCB’s directed toward an individual and an organization. The scale utilized a 5-point Likert scale, with 1 indicating *never* and 5 indicating *always*, and example items included *Take action to protect the organization from potential problems.* and *Defend the organization when other employees criticize it.* (Saks, 2006). The coefficient alpha in Lee and Allen (2002) was reported as .88, and the coefficient alpha in Saks (2006) was reported as .73. Wei (2014) used Lee and Allen’s (2002) 16-item OCBI and OCBO measures on job performance and situated human capital as a moderating
variable and reported significant standardized loadings on all measurement items and their respective constructs (t values range: 3.89 to 31.2, \( p < .001 \)). In addition, none of the confidence intervals associated with the phi values were reported to contain the value of one, and it was concluded that the measures exhibited convergent and discriminant validity (Montoya-Weiss, Massey, & Song, 2001; Wei, 2014).

**Study Survey**

The survey (see Appendix C) was constructed using the Qualtrics design tool. The topic of workplace perceptions was considered relevant to the target population and would assist in increasing the response rate (Anseel, Lievens, Schollaert, & Choragwicka, 2010). Anseel, Lievens, Schollaert, and Choragwicka (2010) found response-enhancing techniques including topic salience and sponsorship to be impacted by the type of respondents. The University of Texas at Tyler logos and branding was prevalent on all pages of the survey in support of the sponsorship benefits attributed to a university (Anseel et al., 2010). Several common method variance control measures were utilized to limit exposure in conducting the survey (Podsakoff et al., 2003). Examples include the limiting of survey blocks, variable order and scale randomization, the use of a marker variable, and instructional manipulation checks.

The survey was limited to seven blocks to minimize participant fatigue and survey apprehension and to maximize the rate of completion, page breaks were used to reduce unnecessary scrolling (Galesic & Bosnjak, 2009; Toepoel, Das, & Soest, 2009). The survey ensured that all independent variables preceded the intervening variables, marker variable, dependent variables, and demographic information to reduce the effects of common method variance (Lindell & Whitney, 2001). Lindell and Whitney (2001)
posited that “it would be ideal to locate the MV-marker variable scale immediately after the theoretically relevant predictors and before the dependent variable.” (p. 118). The blocks containing the independent variable and intervening variables were randomized as an added control measure, beyond limiting satisficing using a short survey and accountability checks, where task difficulty for this survey is minimal (Krosnick & Presser, 2009). Instructional manipulation questions (Oppenheimer, Meyvis, & Davidenko, 2009) were utilized in the survey, one in the independent variable block which contains four scales and the other in one of the intervening variable blocks that contains two scales, to reduce common method variance (Podsakoff & Organ, 1986).

The intervening variables of perceived organizational support and organization engagement were constructed in two separate blocks to preserve the independence of the scales and to assist in their randomization. Participants were asked to select a particular response “Please select To some extent” in the growth subscale (Nimon & Zigarmi, 2015b) and “Please select the option that says neither agree nor disagree” in the perceived organizational support scale (Eisenberger et al., 1997) to confirm that they understood what was requested of them. Instructional manipulation questions ask participants to provide a confirmation that they have read an instruction, which can improve the statistical power and reliability of a dataset (Oppenheimer et al., 2009). Respondents saw a progress bar to alert them of their progress, were required to answer all items as the forced response setting was applied, and were not permitted to use the back button (Maronick, 2009). The progress indicator serves as a visual motivator to facilitate completion, whereas the use of mandatory questions serves to slow participants from skipping questions (Maronick, 2009).
Respondents were introduced to five qualification questions that asked them to identify whether they work in a medical coding capacity, are a current or past member of AHIMA, identify their generational cohort, cite the number of weekly hours they work, and reveal what country they currently reside in. Respondents who answered that they work in a medical coding capacity, are a current or past member of AHIMA, were older than 18 years of age, worked 40 hours or more in a week, and resided in the United States were permitted to take the survey, and those who did not qualify were prompted to the end of the survey. Respondents who satisfied the qualification questions were then directed to the informed consent page which outlined what to expect from the survey.

Block 1 in the survey contained the informed consent (see Appendix A) statement, which states that the survey is voluntary, confidential, and anonymous. Participants were able to decline taking the survey or choose to exit the survey at any time without complication. Participants who agreed and consented to taking the survey acknowledged that they were at least 18 years of age. Those who declined or did not provide consent to take the survey were prompted to an end of the survey message, as participants who do not provide a response but wished to exit the survey did so by closing the screen or their internet browser. The informed consent statement revealed that there were no right or wrong answers in regards to workplace opinions; however, respondents were informed that some questions within the survey required a specific response to avoid being removed from the survey. This statement alluded to the instructional manipulation questions (Oppenheimer et al., 2009) that were employed in the survey.

Block 2 containing the study’s independent variable was randomized and Blocks 3 and 4 including the intervening variable scales were randomized (Galesic & Bosnjak,
2009), followed by the study’s marker variable in block 5. Block 6 contained the dependent variable items, and was followed by block 7, which contained the study’s demographics. Randomization of survey questions and grouping variables by scale have seen mixed results concerning reliabilities (Goodhue & Loiacono, 2002); this study randomized the independent variable scales and the intervening variable scales. Specifically, block 2 contained the 12-item organizational cognition scales used in this study. The four 3-item organizational cognition scales were built in the survey as four separate questions to preserve each 3-item scale per question, and these scales were randomized within Block 2. Block 3 consisted of the 8-item perceived organizational support scale. Block 4 included the 6-item organization engagement scale. Blocks 3 and 4 were randomized (Goodhue & Loiacono, 2002). Block 5 contained the 8-item attitudes toward the color blue scale, which served as the marker variable. Block 6 was composed of the 4-item organizational citizenship behavior toward the organization scale. Block 7 contained the study’s demographic questions that included, organizational level, job setting, gender, ethnicity, salary range, and control variables regarding credentials earned and the state that work is performed in (Lyons et al., 2014).

The demographic variables (see Appendix D) used provided a baseline of information to compare the sample data with the parameters of the population for representativeness (Lyons et al., 2014). Bureau of Labor statistics data provided comparison for employee levels distinguishing nonsupervisory employees, job setting, gender, ethnicity, and salary range (see Table 3). Respondents who either declined the informed consent, did not qualify or correctly answer the instructional manipulation questions (Oppenheimer et al., 2009), and those who completed the survey received the
standard message “We thank you for your time spent taking this survey. Your response has been recorded.”

**Data Collection Procedures**

Institutional Review Board (IRB) permissions from The University of Texas at Tyler were sought prior to data collection. Survey participants were recruited via a representative of AHIMA who contacted medical coding professionals using an organizational email distribution list. The five state associations of Georgia, Louisiana, Michigan, North Carolina, and South Carolina include just over 10,000 medical coding professionals (AHIMA report, 2018). Participants who perform the role that is consistent with the medical coding profession were sought to complete a voluntary survey, and their anonymity and confidentiality were maintained. The Qualtrics survey tool housed all survey information, and any results shared with participating locations consisted of aggregated statistical data.

The survey was piloted to 500 persons to secure at least 40 completed surveys in order to test the survey logistics and functionality prior to a full rollout. The participants who completed the survey in the pilot did not receive additional messaging, whereas those who did not complete the survey did receive a redundant message during the full rollout. The full survey rollout consisted of medical coding professionals receiving an email message and a subsequent follow-up message from an AHIMA representative that requested their voluntary participation (see the sample messages in Appendix E). The survey was deployed on Tuesday, September 18, 2018, at 10:00am and remained available for 2 weeks, including a reminder email the following Tuesday, September 25, 2018, at 10:00am from an AHIMA representative. The message identified the purpose of
the survey, the voluntary, confidential, and anonymous nature of the survey, the contact information of the researcher and for the IRB Director, and the support and endorsement of the AHIMA representative.

**Data Analysis Procedures**

Confirmatory factor analysis (CFA) was conducted and analyzed using IBM ® SPSS ® Amos 23.0.0 statistical software. The data collected underwent cleaning prior to being assessed for representativeness and being fit to a measurement model. Common method variance implications and controls were identified, and structural models were introduced. The relationships between the predictors, intervening variables, and outcome variables were specified. The section concluded with the identified limitations and a summary.

**Data Cleaning**

Respondents were removed from the survey if they did not meet the minimum qualification criteria, failed the instructional manipulation questions (Galesic & Bosnjak, 2009), straight-lined questions (Podsakoff & Organ, 1986), or exceeded a completion time of 30 minutes. The perceived organizational support, organization engagement, and ATCB scales contained reverse-coded items, and participants who answered these measures with a straight line or with an item response that is consistent with positively worded items were removed. For example, the POS scale has positively worded items such as *My organization really cares about my wellbeing* and *My organization strongly considers my goals and values*, where a consistent Likert response to the reverse coded item *My organization shows very little concern for me* would be inconsistent with the scale. Similarly, the ATCB measure has positively worded items such as *I like the color*
blue and I like blue clothes, whereas a consistent Likert response to the reverse coded items of I really don’t like the color blue or I don’t like blue clothes, will be indicative of inattentiveness and result in being removed.

The removal time control was established to recognize the limitations that are generally prevalent in survey outlier time frames. Survey completion times that were more than one and a half standard deviation of the mean were more indicative of primacy effects (Malhotra, 2008). Respondents were removed via survey script logic if they failed to answer the instructional manipulation questions correctly. The software package R was utilized to clean the raw survey data collected (R Core Team, 2018). Missing values were limited as a result of forced response, and incomplete surveys were identified within the raw dataset, as the data were not complete across all items and were removed accordingly (de Jonge & van der Loo, 2013).

**Measurement Model**

Confirmatory factor analysis allows researchers more insight into testing hypotheses via inferential means and can offer more analytically informative options (Osborne & Costello, 2009). Maximum likelihood (ML) estimation was utilized as the data were assumed to have no outliers, be normally distributed, and have no missing data (Schumacker & Lomax, 2016). Skewness and kurtosis values were calculated by taking the respective value divided by its standard error, and skew values > 3.00 or kurtosis values > 8.00 are indicative of these issues being present (Kline, 2016). The Mahalanobis distance (D²) values were utilized to screen for outliers by measuring the distance in variance between “the profile of scores for that case and the vector of sample means” (Kline, 2016, p. 73). Multivariate normality was assessed using Mardia’s statistic
and the critical ratio value, as values > 5.00 are indicative of being nonnormally distributed (Bentler, 2005; Byrne, 2010). As the data were considered nonnormally distributed, bootstrapping was employed and was compared to non-bootstrapped results and reported accordingly (Byrne, 2010; Kline, 2016).

In accordance with Schumacker and Lomax (2016), data were fit to a measurement model before testing the theoretical and alternative models. Data fit was analyzed in consideration of a 7-factor correlated measurement model and a 4-factor higher order model (see Figures 4 and 5).

Figure 4. 7-Factor Measurement Model
Pattern and structural coefficients were reported to ensure the observed values aligned with the latent constructs (Graham, Guthrie, & Thompson, 2003). Model fit indices were utilized to satisfy acceptable parameter levels, and the following thresholds were used: Tucker-Lewis index (TLI) ≥ .95, comparative fit index (CFI) ≥ .95, the root means square error of approximation (RMSEA) should range between .05 to .08, and the standardized root mean square (SRMR) ≤ .08 (Joreskog & Sorbom, 1993; Kline, 2016; Schreiber, Nora, Stage, Barlow, & King, 2006; Schumacker et al., 2016). Absolute correlation residuals greater than .10 were used to identify any discrepancies between the observed and predicted data (Kline, 2016). The Akaike Information Criteria (AIC) and Bayesian Information Criterion (BIC) values were utilized to compare models, as lower values generally indicate better model fit (Kline, 2016; Schumacker & Lomax, 2016).
Implied correlations and average variance extracted (AVE) were utilized to assess convergent validity, as composite reliability (CR) was reported as a measure of reliability in keeping with Farrell and Rudd (2009). Latent variables that account for more variance in observed variables beyond measurement error, extraneous influences, or other constructs within the conceptual framework are appropriately accounting for discriminant validity (Farrell & Rudd, 2009). Factor correlations greater than or equal to .80 may signal poor discriminant validity (Brown, 2006), where good convergent validity may be indicated when factor loadings do not crossload and pass the .40 weak threshold or exceed or match the .60 strong threshold (Cabrera-Nguyen, 2010; Garson, 2010). This study examined factor loadings using the .5 to .7 value range (Bagozzi & Yi, 1988; Kline, 2016). Average variance extracted values ≥ .5 as a measure of convergent validity and composite reliability values ≥ .6 were used in this study (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Discriminant validity was evaluated by comparing the square root of the AVE value to ensure that it exceeded the correlation values of the study variables (Hair et al., 2010).

**Common Method Variance**

Common method variance was examined using the CFA marker variable technique in accordance with Williams, Hartman, and Cavazotte (2010). The CFA models included the 8-item attitudes toward the color blue marker variable (Miller & Chiodo, 2008) and the 7 study factors which included 30 indicators. This included 12 organizational cognition factor items, 8 perceived organizational support items, 6 organization engagement items, 8 ATCB marker items, and 4 items for organizational citizenship behaviors. According to Williams, Hartman, & Cavazotte (2010), the
selection of a marker variable that is theoretically unrelated to the substantive variables is necessary in detecting method variance. The attitudes toward the color blue measure has been supported as an ideal marker variable (Simmering et al., 2015). First, the baseline model was tested, which involved setting the method and substantive latent variables to zero and changing the unstandardized variances and regression weights to match the values in the CFA model. The constrained (Model-C) model was then established to set the model factor loadings from the latent marker variable so that they were equal. Model fit indices were reviewed in accordance with Williams, Hartman, and Cavazotte (2010) to determine the presence of CMV. Specifically, the values and differences of each model’s chi-square, degrees of freedom, and comparative fit index statistics are reported. Model-U and Model-R were not required as common method variance did not appear to impact this study (cf. Williams et al., 2010).

**Structural Models**

![Figure 6. Structural Model](image)

Figure 6 identifies this study’s structural model with single intervening pathways and the multi-step intervening hypothesis as illustrated. Hypothesis 1 examined the indirect effect that organizational cognition has on organization engagement through perceived organizational support while controlling for the direct effect of organizational
cognition on organization engagement, as the association of cognitions and perceptions toward the organizational environment influences one’s engagement toward the organization (cf. Eisenberger et al., 1986; Saks, 2006; Zigarmi et al., 2009). Hypothesis 2 examined the indirect effect that organizational cognition has on organizational citizenship behaviors through organization engagement while controlling for the direct effect of perceived organizational support on organization engagement, as engagement related to the organization influences one’s willingness to go above and beyond work roles in the form of organizational citizenship behaviors (Saks, 2006). Hypothesis 3 examined the indirect effect of organizational cognition on organizational citizenship behaviors through perceived organizational support then organization engagement while controlling for the direct effect of organizational cognition on organization engagement. This reveals that organizational cognition influences an individual’s perception of organizational support and organization engagement and the likelihood of exhibiting organizational citizenship behaviors (cf. Eisenberger et al., 1986; Nimon & Zigarmi, 2015b; Saks, 2006). Figure 7 illustrates this study’s alternative model. The alternative model represents the higher order model with a direct path from organizational cognition to organizational citizenship behaviors.

**Figure 7. Alternative Model**

The multiple indirect effects were assessed using the phantom model approach, and point estimates with 95% confidence intervals were reported (Macho & Ledermann,
Specifically, the indirect effect for organizational cognition on organization engagement through perceived organizational support, while controlling for the direct effect of organizational cognition on organization engagement, was examined to be in line with hypothesis H1. In addition, the indirect effect of organizational cognition on organizational citizenship behaviors through organization engagement, while controlling for the direct effect of perceived organizational support on organization engagement, was examined for significance and to support hypothesis H2. Hypothesis H3 was examined to identify the indirect effect that organizational cognition has on organizational citizenship behaviors through perceived organizational support then organization engagement while controlling for the direct effect of organizational cognition on organization engagement. The phantom model affords researchers using Amos software the ability to specify indirect effects and direct effects from total effects. The use of multiple mediators reduces the likelihood of parameter bias, whereas examining perceived organizational support and organization engagement as single intervening variables reduces the chance of accounting for the relationships proposed (Preacher & Hayes, 2008). Bootstrapped point estimates, standard errors, and confidence intervals were provided to extend beyond the limitations found in the Casual Steps (Baron & Kenny, 1986) and Sobel (1982) approach. The strength of the effect sizes, confidence intervals, and significance values provided insight into this study’s findings (Schumacker & Lomax, 2016).

**Limitations**

Podsakoff, MacKenzie, Lee, and Podsakoff (2003) highlighted the consideration of common method variance and the bias that can be attributed to measurement error.
Particularly, self-report surveys often require respondents to access higher level thought mechanisms, deduce key information, and provide their response in a simple format created for expediency. The use of several bias-reducing techniques were utilized to limit the level of risk posed in the study (Podsakoff et al., 2003). As noted in Podsakoff, MacKenzie, Lee, and Podsakoff (2003), respondents’ anonymity was protected to limit any survey apprehension, and consideration of variable placement and the inclusion of an unrelated question or scale such as a marker variable was utilized to create psychological separation and internal consistency. The variables and measurements used in this study are theoretically consistent, and previous study reliabilities support their inclusion.

**Summary of the Chapter**

This chapter identified the methodological components used in this study. The purpose of the study was restated, followed by the hypotheses, and the design of the study. This chapter included key population and sample information, survey measures, and a narrative for the design of the survey. Data collection and analysis procedures were addressed; the uses of specific statistical packages, sample representativeness, the study’s measurement model and common method variance considerations were covered. Finally, the study’s structural models and limitations were presented.
Chapter 4 - Results

Introduction

This chapter presents the results for the statistical analyses employed for this study. The chapter includes data collection and demographics of the medical coding professionals surveyed. In addition, sample representativeness, statistical assumptions, measurement models, and structural models are discussed, and common method variance and this study’s hypotheses are examined. The chapter concludes with a summary.

Data Collection and Demographics

The data were collected using the online survey tool Qualtrics®. Prior to full data collection, the survey was piloted on September 17, 2018, to a selected AHIMA group which exceeded 500 persons, and 111 responses were collected to test the survey functionality prior to the full group rollout. The 111 collected responses were not included in the data analyses conducted in chapter 4, because it was determined that the attitude towards the color blue scale would replace the negative affect scale (Thompson, 2007) as this study’s marker variable. The attitude towards the color blue scale (Miller & Chiodo, 2008) was deemed appropriate because it had no theoretical relationships with the study’s substantive variables. Data collection for the full survey rollout commenced on September 18, 2018, and concluded on October 2, 2018, as reported in Chapter 3. The minimum power requirement of 305 clean responses was not satisfied during this period. The survey was reinitiated on November 13, 2018 and concluded on November 25, 2018.
In total, there were 813 participants who initiated the survey, and after data-cleaning measures were employed there were 363 usable survey responses. Of the participants, 188 failed to satisfy the qualification questions or accept the provisions cited by the informed consent statement and therefore were removed. There were 104 survey participants who failed to correctly answer the two instructional manipulation questions, which resulted in their removal (cf. Oppenheimer et al., 2009). The inclusion of instructional manipulation checks aided the improvement of the power and reliability of the collected dataset. Participants involved in satisficing or not providing their full cognitive energy toward the survey questions as well as those who provided random responses were limited as a result of these checks. (Krosnick, 1999; Openheimer et al., 2009). In addition, 137 participants quit or did not complete all of the survey items, and incomplete survey responses were removed. The conservative listwise deletion approach was preferred to maintain sample size and correlations and to avoid the need to estimate missing data (cf. Schumacker & Lomax, 2016).

Survey response times were then reviewed, and the minimum completion time was 2.9 minutes, with 25% of the remaining distribution completing the survey in 5.5 minutes. The median response time was 7 minutes, with 75% of participants completing the survey in 9.1 minutes or less. In consideration of participant attentiveness and the mean completion time of 24.5 minutes, the lower distribution of responses was maintained and a removal time of 30 minutes was established (cf. Malhotra, 2008). As a result, 13 responses were removed from the dataset. Finally, there were 8 participants removed for straightlining the POS, organization engagement, or ATCB measurement scales. The three measurement scales contained negatively worded items, and
respondents that answered in a straight line beyond the scale mid-points were removed (Schonla & Toepoel, 2015).

Respondents from North Carolina (35.5%), Michigan (13.2%), Georgia (13.2%), South Carolina 9.1%, Louisiana (13.5%), and identified as other (15.4%) made up the total survey group. The sample predominantly consisted of Generation Boomer (41.3%) and Generation X (47.4%) non-Hispanic Caucasian women (89.5%), who worked in hospitals (56.8%) and other settings (35.5%) outside ambulatory clinics or private practice, and identified as nonmanagers (66.4%). BLS percentages for ethnicity included the five listed groups, with overlapping percentages for individuals belonging to more than one ethnic group. The majority of respondents indicated earning a salary in the ranges of $39,181 - $64,610 and $64,611+ (see Table 5).

Table 5

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Sample %</th>
<th>BLS %</th>
<th>$\chi^2$</th>
<th>df</th>
<th>p</th>
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Note. Total sample n = 363. BLS = Bureau of Labor Statistics. $\chi^2 = \text{chi-square}$. df = degrees of freedom. The BLS data did not specify mixed or multiple ethnicities, therefore percentages overlap. Sample percentages did not include mixed, multiple, or other ethnicities; n = 342. BLS Salary percentage indicates percentiles.
Table 5 (Continued)

Study Demographics and Population Comparison

<table>
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<th>BLS %</th>
<th>$^{\chi^2}$ df</th>
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<td>$39,181 - $64,610</td>
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<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; $64,611</td>
<td>49.3</td>
<td>90%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Total sample n = 363. BLS = Bureau of Labor Statistics. $^{\chi^2}$ = chi-square. df = degrees of freedom. The BLS data did not specify mixed or multiple ethnicities, therefore percentages overlap. Sample percentages did not include mixed, multiple, or other ethnicities; n = 342. BLS Salary percentage indicates percentiles.

Sample Representativeness

Table 5 identifies the sample and population data used for the analyses conducted to examine representativeness. The sample participants identified themselves from the states of Georgia, Michigan, Louisiana, North Carolina, and South Carolina, and the collected data profile was compared to BLS national data. The $^{\chi^2}$ test concerning gender for the sample yielded values that were not statistically or practically significantly different when compared to the BLS data ($^{\chi^2} = .526$, df = 1, $p = .468$, Cohen’s $w = .038$). Ethnicity values were statistically and practically significantly different when compared to the BLS data ($^{\chi^2} = 11.617$, df = 3, $p = .003$, Cohen’s $w = .184$) as responses from Asian and Hispanic or Latino participants were limited. In addition, analysis of job level ($^{\chi^2} = 43.461$, df = 1, $p < .001$, Cohen’s $w = .346$) provided values that were statistically and
practically significantly different when compared to the BLS data. The sample had a higher proportion of managers or supervisors than nonmanagers when compared to the national statistics. Furthermore, the job setting category sample data were statistically and practically significantly different when compared to the BLS data ($\chi^2 = 25.968, df = 2, p < .001$, Cohen’s $w = .267$). The sample data had more representation in the hospital setting and less so in the clinic, ambulatory, and private settings when compared to the BLS data. The sample data are limited when comparing to the national data, which is understandable given the collection from a small number of states. The sample to population differences provided are statistically ($p \leq .05$) and practically ($w \geq .10$) significantly different (Cohen, 1988; Ellis & Steyn, 2003) for ethnicity, job level, and job setting. As identified, effect sizes are classified as small (.1), medium (.3), and large (.5) in examining practical significance (Cohen, 1988). The practical presumption is that a larger sample derived from a greater cross-section of the United States would not exhibit statistical and practical differences in comparison to BLS data. The sample collected is statistically and practically consistent when compared to national data regarding gender, which is supportive of the profession being predominately composed of women.

**Assumptions**

The cleaned statistical data .csv file was uploaded into the SPSS software platform and the subsequent .sav file was reviewed to ensure data migration. Specifically, all raw data aligned with the appropriate factor item headings, and the full data set of 363 responses was intact. The statistical packages SPSS and AMOS were used to assess multivariate normality and to check for the presence of outliers. Several variables were identified to be negatively skewed and had values exceeding the skew index threshold of
3.0 (Kline, 2016) (see Table 6). The kurtosis values were all recognized to be below the established threshold as a kurtosis index value above 8.0 is indicative of being problematic (Kline, 2016) (see Table 6).

Table 6

<table>
<thead>
<tr>
<th>Variable</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Variable</th>
<th>Skewness</th>
<th>Kurtosis</th>
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<td>-3.251</td>
<td>POS6</td>
<td>-9.492</td>
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<td>PJ1</td>
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<td>-2.408</td>
<td>POS7</td>
<td>-8.977</td>
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<td>PJ2</td>
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<td>POS8</td>
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<td>-3.659</td>
</tr>
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<td>-3.208</td>
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<td>PE3</td>
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<td>OCB1</td>
<td>-2.641</td>
<td>-3.937</td>
</tr>
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<td>OCB2</td>
<td>-6.195</td>
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<td>POS2</td>
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<td>OCB3</td>
<td>-9.234</td>
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<td>-1.224</td>
<td>OCB4</td>
<td>-5.031</td>
<td>0.867</td>
</tr>
</tbody>
</table>

*Note.* DJ = Distributive justice; PJ = Procedural justice; GR = Growth; POS = Perceived organizational support; OE = Organization engagement; OCB = Organizational citizenship behaviors; Standard error of skewness = .128; Standard error of kurtosis = .255.

In the case of outliers, the squared Mahalanobis distance ($D^2$) values were examined to identify whether they were distinctly different from each other (Byrne, 2010). The individual responses were reviewed because they appeared to be outliers, although they were identified to be valid responses; therefore, no additional responses were removed. Mardia’s statistic was calculated (208.487), and the critical ratio (45.326) exceeded the 5.0 nonnormality threshold (Bentler, 2005; Byrne, 2010); therefore,
bootstrapping was employed. There were 2,000 Bollen-Stine bootstrap samples examined along with the ML estimator, 95% bias-corrected confidence levels, and the comparison of the bootstrapped results and the non-bootstrapped results were statistically significantly different (Byrne, 2010; Kline, 2016). The bootstrapped correlations and the bootstrapped confidence intervals and p-values for the indirect and direct effects were reported.

**Measurement Models**

Consistent with the guidance provided by Schumacker and Lomax (2016), the data were fit to a 7-factor measurement model (see Figure 8). The factors of distributive justice, procedural justice, growth, performance expectations, perceived organizational support, organization engagement, and organizational citizenship behaviors were modeled. In addition, the second-order factor of organizational cognition and the related first-order factors of distributive justice, procedural justice, growth, and performance expectations were modeled in a 4-factor higher order model (see Figure 9). Pattern and structural coefficients were identified to ensure that the observed data aligned with their latent constructs. The chi-square statistic, Tucker-Lewis index (TLI) ≥ .95, comparative fit index (CFI) ≥ .95, the root means square error of approximation (RMSEA), and the standardized root mean square (SRMR) were reported. In addition, the average variance extracted (AVE) and composite reliability (CR) were reported. The 7-factor model yielded ($x^2 = 975.373; df = 384; p < .01$) a TLI of .928, a CFI value of .936, which did not meet the established threshold of .95 (Kline, 2016), although the SRMR (.056) and the RMSEA (.065) values satisfied the accepted standards (see Table 7). Review of the factor correlations and structure coefficients is provided (see Table 8) as well as item level
descriptives (see Table 9). Implied and bootstrapped correlations and subsequent calculation of the AVE and CR are also provided (see Table 10). The variables in this study had factor loadings above the stricter threshold of .7, with three exceeding the minimum threshold of .5, and each observed variable correlated with its latent factor (Bagozzi & Yi, 1988; Kline, 2016). In addition, the average variance extracted (AVE) values exceeded the .5 threshold, which is indicative of convergent validity, and the composite reliability (CR) values exceeded the .6 threshold (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Furthermore, the square root of the AVE values exceeded the correlation values of the other variables, which is indicative of discriminant validity (Hair et al., 2010). The 7-factor measurement model modification indices were reviewed to identify potential respecifications of the model. The post hoc exploratory review was undertaken to determine if any substantive modifications could provide a more appropriate fitting measurement model. The covariance and regression weight modification parameters were reviewed, and the suggested changes for correlating error or factor items lacked theoretical support (cf. Byrne, 2010).

The 4-factor higher order model yielded ($x^2 = 994.199; df = 395; p < .01$) a TLI of .929, and a CFI value of .936, which did not meet the established threshold of .95 (Kline, 2016) although the SRMR (.058) and the RMSEA (.065) values satisfied the accepted standards (see Table 7). The variables in the 4-factor higher order model had the majority of factor loadings above the stricter threshold of .7, with several items exceeding the minimum threshold of .5, and each observed variable correlated with its latent factor (Bagozzi & Yi, 1988; Kline, 2016) (see Table 11). In addition, the variables in this study exceeded the AVE threshold ($\geq .5$; Bagozzi & Yi, 1988), which is indicative of
convergent validity (see Table 12). The square root of the AVE values exceeded the correlation values of the other variables, which was indicative of discriminant validity. The composite reliability values exceeded the ≥ .6 threshold (Bagozzi & Yi, 1988; Fornell & Larcker, 1981), to indicate adequate reliability. Consistent with the 7-factor model, the 4-factor higher order model modification indices were reviewed, and it was determined that no changes would be made.

The 7-factor model fit the data better than the 4-factor higher order model ($\Delta \chi^2 = 18.826, \Delta df = 11, p = 0.064$); however, the higher order model was more parsimonious. The chi-square difference was minimal considering that the higher order model had 11 more degrees of freedom. In addition, the higher order factor model had lower AIC and BIC statistics, indicating better model fit (Kline, 2016) (see Table 7). The 7-factor model had 39 absolute correlation residuals over .10, and the 4-factor higher order model had 45 values over the threshold, indicating significant differences between the observed and predicted values (Kline, 2016). The 4-factor higher order model was subsequently used to establish this study’s structural models.
### Table 7

**Fit Indices**

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>TLI</th>
<th>CFI</th>
<th>AIC</th>
<th>BIC</th>
<th>ACR</th>
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</thead>
<tbody>
<tr>
<td>1. 7-Factor Model</td>
<td>975.373</td>
<td>384</td>
<td>.065</td>
<td>.056</td>
<td>.928</td>
<td>.936</td>
<td>1137.373</td>
<td>1452.820</td>
<td>39</td>
</tr>
<tr>
<td>2. 4-Factor Higher Order Model</td>
<td>994.199</td>
<td>395</td>
<td>.065</td>
<td>.058</td>
<td>.929</td>
<td>.936</td>
<td>1134.199</td>
<td>1406.808</td>
<td>45</td>
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</table>

*Note. $\chi^2$ = chi-square. df = degrees of freedom. RMSEA = root mean square error of approximation. SRMR = standardized root mean square residual. TLI = Tucker-Lewis Index. CFI = comparative fit index. AIC = Akaike information criterion. BIC = Bayesian information criterion. ACR = absolute correlation residuals.*

### Table 8

**Pattern and Structural Coefficients – 7-Factor Model**

<table>
<thead>
<tr>
<th>Item</th>
<th>Distributive Justice (DJ)</th>
<th>Procedural Justice (PJ)</th>
<th>Growth (GR)</th>
<th>Performance Expectations (PE)</th>
<th>Organizational Support (POS)</th>
<th>Organization Engagement (OE)</th>
<th>Citizenship Behavior (OCB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P</td>
<td>S</td>
<td>P</td>
<td>S</td>
<td>P</td>
<td>S</td>
<td>P</td>
</tr>
<tr>
<td>DJ1</td>
<td>0.730</td>
<td>0.730</td>
<td>0.504</td>
<td>0.527</td>
<td>0.291</td>
<td>0.516</td>
<td>0.451</td>
</tr>
<tr>
<td>DJ2</td>
<td>0.943</td>
<td>0.943</td>
<td>0.651</td>
<td>0.681</td>
<td>0.376</td>
<td>0.666</td>
<td>0.583</td>
</tr>
<tr>
<td>DJ3</td>
<td>0.894</td>
<td>0.894</td>
<td>0.622</td>
<td>0.650</td>
<td>0.359</td>
<td>0.637</td>
<td>0.557</td>
</tr>
<tr>
<td>PJ1</td>
<td>0.572</td>
<td>0.828</td>
<td>0.828</td>
<td>0.617</td>
<td>0.425</td>
<td>0.623</td>
<td>0.502</td>
</tr>
<tr>
<td>PJ2</td>
<td>0.635</td>
<td>0.919</td>
<td>0.919</td>
<td>0.685</td>
<td>0.472</td>
<td>0.692</td>
<td>0.558</td>
</tr>
<tr>
<td>PJ3</td>
<td>0.580</td>
<td>0.840</td>
<td>0.840</td>
<td>0.626</td>
<td>0.431</td>
<td>0.632</td>
<td>0.510</td>
</tr>
<tr>
<td>GR1</td>
<td>0.645</td>
<td>0.666</td>
<td>0.894</td>
<td>0.894</td>
<td>0.427</td>
<td>0.665</td>
<td>0.594</td>
</tr>
<tr>
<td>GR2</td>
<td>0.651</td>
<td>0.672</td>
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<td>0.901</td>
<td>0.430</td>
<td>0.670</td>
<td>0.599</td>
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<tr>
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<td>0.649</td>
<td>0.870</td>
<td>0.870</td>
<td>0.415</td>
<td>0.647</td>
<td>0.579</td>
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</tbody>
</table>

*Note. P = Pattern coefficient. S = Structural coefficient. DJ = Distributive justice. PJ = Procedural justice. GR = Growth. PE = Performance expectation. POS = Perceived organizational support. OE = Organization engagement. OCB = Organizational Citizenship Behavior*
<table>
<thead>
<tr>
<th>Item</th>
<th>Distributive Justice (DJ)</th>
<th>Procedural Justice (PJ)</th>
<th>Growth (GR)</th>
<th>Performance Expectations (PE)</th>
<th>Organizational Support (POS)</th>
<th>Organization Engagement (OE)</th>
<th>Citizenship Behavior (OCB)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>P</td>
<td>S</td>
<td>P</td>
<td>S</td>
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<tr>
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<td>0.868</td>
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<td>0.881</td>
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<td>0.674</td>
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<td>OE6</td>
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<td>0.542</td>
<td>0.274</td>
<td>0.586</td>
<td>0.816</td>
<td>0.816</td>
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<td>0.570</td>
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Table 9

*Item Level Descriptives*

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<th>$M$</th>
<th>$SD$</th>
<th>Variable</th>
<th>$M$</th>
<th>$SD$</th>
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<tr>
<td>PE2</td>
<td>4.990</td>
<td>1.235</td>
<td>OE6</td>
<td>3.240</td>
<td>1.169</td>
</tr>
<tr>
<td>PE3</td>
<td>4.910</td>
<td>1.221</td>
<td>OCB1</td>
<td>3.010</td>
<td>1.235</td>
</tr>
<tr>
<td>POS1</td>
<td>5.360</td>
<td>1.701</td>
<td>OCB2</td>
<td>3.620</td>
<td>1.109</td>
</tr>
<tr>
<td>POS2</td>
<td>5.010</td>
<td>1.775</td>
<td>OCB3</td>
<td>4.080</td>
<td>0.986</td>
</tr>
<tr>
<td>POS3</td>
<td>5.350</td>
<td>1.827</td>
<td>OCB4</td>
<td>3.770</td>
<td>1.006</td>
</tr>
</tbody>
</table>

*Note.* DJ = Distributive justice; PJ = Procedural justice; GR = Growth; POS = Perceived organizational support; OE = Organization engagement; OCB = Organizational citizenship behaviors; $n = 363$. 

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Table 10

*Implied and Bootstrapped Correlations, Average Variance Extracted (AVE), Composite Reliability (CR) – 7-Factor Model*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Distributive Justice</td>
<td>0.861</td>
<td>0.689</td>
<td>0.720</td>
<td>0.396</td>
<td>0.706</td>
<td>0.616</td>
<td>0.501</td>
</tr>
<tr>
<td>2. Procedural Justice</td>
<td>0.691</td>
<td>0.929</td>
<td>0.743</td>
<td>0.511</td>
<td>0.752</td>
<td>0.606</td>
<td>0.480</td>
</tr>
<tr>
<td>3. Growth</td>
<td>0.722</td>
<td>0.745</td>
<td>0.943</td>
<td>0.473</td>
<td>0.742</td>
<td>0.664</td>
<td>0.558</td>
</tr>
<tr>
<td>4. Performance Expectation</td>
<td>0.399</td>
<td>0.513</td>
<td>0.477</td>
<td>0.909</td>
<td>0.389</td>
<td>0.335</td>
<td>0.309</td>
</tr>
<tr>
<td>5. Organizational Support</td>
<td>0.707</td>
<td>0.753</td>
<td>0.743</td>
<td>0.391</td>
<td>0.901</td>
<td>0.715</td>
<td>0.606</td>
</tr>
<tr>
<td>6. Organization Engagement</td>
<td>0.618</td>
<td>0.607</td>
<td>0.665</td>
<td>0.336</td>
<td>0.718</td>
<td>0.911</td>
<td>0.676</td>
</tr>
<tr>
<td>7. Citizenship Behavior</td>
<td>0.503</td>
<td>0.482</td>
<td>0.561</td>
<td>0.311</td>
<td>0.606</td>
<td>0.678</td>
<td>0.853</td>
</tr>
<tr>
<td>CR</td>
<td>0.894</td>
<td>0.942</td>
<td>0.955</td>
<td>0.922</td>
<td>0.966</td>
<td>0.960</td>
<td>0.886</td>
</tr>
<tr>
<td>AVE</td>
<td>0.740</td>
<td>0.862</td>
<td>0.888</td>
<td>0.826</td>
<td>0.812</td>
<td>0.830</td>
<td>0.727</td>
</tr>
<tr>
<td>M</td>
<td>3.504</td>
<td>3.898</td>
<td>3.672</td>
<td>5.040</td>
<td>5.164</td>
<td>3.189</td>
<td>3.619</td>
</tr>
<tr>
<td>SD</td>
<td>1.331</td>
<td>1.293</td>
<td>1.405</td>
<td>1.033</td>
<td>1.449</td>
<td>0.997</td>
<td>0.877</td>
</tr>
</tbody>
</table>

*Note.* Bootstrapped correlations found on the upper triangle based on 2,000 bias-corrected samples; CR = composite reliability; AVE = average variance extracted; square root of AVE found on the diagonal; \( n = 363 \).
Table 11

*Pattern and Structural Coefficients – 4-Factor Higher Order Model*

| Item | Organizational Cognition | | | Organizational Support | | | Organization Engagement | | | Citizenship Behavior | | |
|------|--------------------------|------------------|------------------|--------------------------|------------------|------------------|--------------------------|------------------|------------------|------------------|------------------|
|      | DJ                       | 0.818            | 0.818            | 0.700                    | 0.602            | 0.496            |                          |                  |                  |                  |
|      | PJ                       | 0.862            | 0.862            | 0.738                    | 0.634            | 0.523            |                          |                  |                  |                  |
|      | GR                       | 0.879            | 0.879            | 0.752                    | 0.647            | 0.533            |                          |                  |                  |                  |
|      | PE                       | 0.520            | 0.520            | 0.445                    | 0.382            | 0.316            |                          |                  |                  |                  |
|      | POS1                     | 0.755            | 0.882            | 0.882                    | 0.633            | 0.536            |                          |                  |                  |                  |
|      | POS2                     | 0.789            | 0.921            | 0.921                    | 0.661            | 0.559            |                          |                  |                  |                  |
|      | POS3                     | 0.698            | 0.816            | 0.816                    | 0.586            | 0.495            |                          |                  |                  |                  |
|      | POS4                     | 0.758            | 0.886            | 0.886                    | 0.636            | 0.538            |                          |                  |                  |                  |
|      | POS5                     | 0.658            | 0.768            | 0.768                    | 0.552            | 0.466            |                          |                  |                  |                  |
|      | POS6                     | 0.737            | 0.861            | 0.861                    | 0.618            | 0.523            |                          |                  |                  |                  |
|      | POS7                     | 0.590            | 0.690            | 0.690                    | 0.495            | 0.419            |                          |                  |                  |                  |
|      | POS8                     | 0.577            | 0.674            | 0.674                    | 0.484            | 0.409            |                          |                  |                  |                  |
|      | OE1                      | 0.602            | 0.587            | 0.819                    | 0.818            | 0.555            |                          |                  |                  |                  |
|      | OE2                      | 0.614            | 0.599            | 0.820                    | 0.835            | 0.566            |                          |                  |                  |                  |
|      | OE3                      | 0.454            | 0.443            | 0.542                    | 0.617            | 0.418            |                          |                  |                  |                  |
|      | OE4                      | 0.691            | 0.674            | 0.963                    | 0.939            | 0.637            |                          |                  |                  |                  |
|      | OE5                      | 0.702            | 0.685            | 0.968                    | 0.955            | 0.648            |                          |                  |                  |                  |
|      | OE6                      | 0.600            | 0.586            | 0.825                    | 0.816            | 0.553            |                          |                  |                  |                  |
|      | OCB1                     | 0.443            | 0.443            | 0.495                    | 0.740            | 0.730            |                          |                  |                  |                  |
|      | OCB2                     | 0.400            | 0.400            | 0.447                    | 0.659            | 0.659            |                          |                  |                  |                  |
|      | OCB3                     | 0.409            | 0.409            | 0.457                    | 0.673            | 0.674            |                          |                  |                  |                  |
|      | OCB4                     | 0.512            | 0.512            | 0.572                    | 0.850            | 0.843            |                          |                  |                  |                  |

Table 12

*Implied and Bootstrapped Correlations, Average Variance Extracted (AVE), Composite Reliability (CR) – 4-Factor Higher Order Model*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organizational Cognition</td>
<td>0.877</td>
<td>0.856</td>
<td>0.734</td>
<td>0.605</td>
</tr>
<tr>
<td>2. Organizational Support</td>
<td>0.856</td>
<td>0.901</td>
<td>0.715</td>
<td>0.606</td>
</tr>
<tr>
<td>3. Organization Engagement</td>
<td>0.736</td>
<td>0.718</td>
<td>0.911</td>
<td>0.676</td>
</tr>
<tr>
<td>4. Citizenship Behavior</td>
<td>0.607</td>
<td>0.607</td>
<td>0.678</td>
<td>0.852</td>
</tr>
<tr>
<td>CR</td>
<td>0.911</td>
<td>0.966</td>
<td>0.960</td>
<td>0.885</td>
</tr>
<tr>
<td>AVE</td>
<td>0.770</td>
<td>0.812</td>
<td>0.830</td>
<td>0.727</td>
</tr>
<tr>
<td>M</td>
<td>4.029</td>
<td>5.164</td>
<td>3.189</td>
<td>3.619</td>
</tr>
<tr>
<td>SD</td>
<td>1.034</td>
<td>1.449</td>
<td>0.997</td>
<td>0.877</td>
</tr>
</tbody>
</table>

*Note.* Bootstrapped correlations found on the upper triangle, CR = composite reliability, AVE = average variance extracted; square root of AVE found on the diagonal; \( n = 363 \).

*Figure 8.* 7-Factor Measurement Model Values.
Structural Models

There are two structural models identified, including the hypothesized model and the alternative model. Fit indices for these models are reported (see Table 13). The 4-factor higher order hypothesized model (Model 1) includes the indirect paths of organizational cognition on organization engagement through perceived organizational support; organizational cognition on organizational citizenship behaviors through organization engagement; and organizational cognition on organizational citizenship behaviors through perceived organizational support then organization engagement (see Figure 10). The alternative model (Model 2) builds upon the previous model and includes the direct path from organizational cognition to the outcome variable organizational citizenship behaviors, (see Figure 11). The fit indices for Models 1 and 2 are examined to
determine the best fit. The difference in fit indices between Models 1 and 2 ($\Delta \chi^2 [1] = 10.492 \ p = .001$) is statistically significantly different. Model 1 is identified as the better fitting model.

In comparison of Model 1 and Model 2, the alternative model (Model 2) shows a reduction in the chi-square value and a drop in one degree of freedom when compared to Model 1. In addition, the CFI value (.935) exceeds that found in Model 1 (.934), and the AIC statistic (1134.606) and BIC statistic (1403.320) had lower values, although these differences are negligible. In particular, the BIC delta (4.597) between Model 1 and Model 2 did not exceed the threshold of 10, indicating very strong support for the model with the lower value (Raftery, 1995). The added direct path of organizational cognition on organizational citizenship behavior, which differentiates Model 1 from Model 2, was not statistically significant (.239, $p > .10$; SE = .451; CI = -.184, .630). In contrast, Model 2 had 47 absolute correlation residual values in comparison to Model 1 which had 56 residual values over the .10 threshold, which is indicative of the observed data having deficiencies in comparison to the predicted data (Kline, 2016). In consideration of this study’s hypotheses and the better fitting model, direct and indirect effects are provided for Model 1. Table 14, identifies this study’s direct and indirect effects and standard errors, with 95% confidence bounds.

Model 1 had a statistically and practically significant indirect effect for organizational cognition on organization engagement as intervened by perceived organizational support (.286, $p \leq .01$; SE = .090; CI = .109, .470) while controlling for the direct effect of organizational cognition on organization engagement. In addition, organizational cognition had a statistically and practically significant indirect effect on
organizational citizenship behaviors through organization engagement (.343, p ≤ .001; SE = .092; CI = .179, .536) while controlling for the direct effect of perceived organizational support on organization engagement. Also, organizational cognition had a statistically and practically significant indirect effect on organizational citizenship behaviors through perceived organizational support and organization engagement (.220, p ≤ .01; SE = .070; CI = .076, .358) while controlling for the direct effect from organizational cognition on organization engagement. The statistically and practically significant direct effect for organizational cognition on perceived organizational support (1.294, p ≤ .001; SE = .094; CI = 1.117, 1.493) is reported. In addition, the statistically significant and practically non-significant direct effect of perceived organizational support on organization engagement (.221, p ≤ .01; SE = .071; CI = .080, .358) is provided, and the statistically significant and practically non-significant direct effect of organizational cognition on organization engagement (.445, p ≤ .001; SE = .113; CI = .248, .693) is identified. The practical significance of the indirect effects are interpreted, as the value of the effect is considered; when there is a unit increase in organization cognition, the variable organizational citizenship behaviors is increased by the value of the indirect effect through the intervening variable(s). Preacher and Kelley (2011) noted the complexity for establishing practical significance by interpreting a quantitative value for a qualitative concept. The relationship between perceived organizational support and organization engagement does not appear to be spurious, as both are impacted by organizational cognition (cf. Preacher & Hayes, 2008; Preacher & Kelley, 2011). The significant indirect effects, direct effects, and positive direction are indicative of complementary mediation (Zhao et al., 2010). This suggests that the intervening variables are consistent with the theoretical framework and that additional mediating variables may be considered.
Table 13

Fit Indices for Structural Models

<table>
<thead>
<tr>
<th>Model</th>
<th>$\chi^2$</th>
<th>Df</th>
<th>RMSEA</th>
<th>SRMR</th>
<th>CFI</th>
<th>AIC</th>
<th>BIC</th>
<th>ACR</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Organizational Cognition -&gt; Perceived Organizational Support -&gt; Engagement -&gt; Citizenship Behavior and Organizational Cognition -&gt; Engagement -&gt; Citizenship Behavior</td>
<td>1007.098</td>
<td>397</td>
<td>.065</td>
<td>.060</td>
<td>.934</td>
<td>1143.098</td>
<td>1407.917</td>
<td>56</td>
</tr>
<tr>
<td>2. Organizational Cognition -&gt; Perceived Organizational Support -&gt; Engagement -&gt; Citizenship Behavior and Organizational Cognition -&gt; Engagement -&gt; Citizenship Behavior and Organizational Cognition -&gt; Citizenship Behavior</td>
<td>996.606</td>
<td>396</td>
<td>.065</td>
<td>.058</td>
<td>.935</td>
<td>1134.606</td>
<td>1403.320</td>
<td>47</td>
</tr>
</tbody>
</table>

Note. $\chi^2$ = chi-square. df = degrees of freedom. RMSEA = root mean square error of approximation. SRMR = standardized root mean square residual. CFI = comparative fit index. BIC = Bayesian information criterion. AIC = Akaike information criterion. ACR = absolute correlation residuals.
Table 14

*Model 1 Bootstrap Estimates of Specific Indirect and Direct Effects with Standard Errors and 95% Confidence Bounds.*

<table>
<thead>
<tr>
<th>Effect</th>
<th>Point Estimate</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect effect of OC on OE through POS</td>
<td>.286***</td>
<td>.090</td>
<td>.109</td>
</tr>
<tr>
<td></td>
<td>.276***</td>
<td>.089</td>
<td>.098</td>
</tr>
<tr>
<td>Indirect effect of OC on OCB through OE</td>
<td>.343a</td>
<td>.092</td>
<td>.179</td>
</tr>
<tr>
<td></td>
<td>.290a</td>
<td>.078</td>
<td>.151</td>
</tr>
<tr>
<td>Indirect effect of OC on OCB through POS and OE</td>
<td>.220***</td>
<td>.070</td>
<td>.076</td>
</tr>
<tr>
<td></td>
<td>.182***</td>
<td>.060</td>
<td>.063</td>
</tr>
<tr>
<td>Direct effect of OC on POS</td>
<td>1.294a</td>
<td>.094</td>
<td>1.117</td>
</tr>
<tr>
<td></td>
<td>.856a</td>
<td>.023</td>
<td>.810</td>
</tr>
<tr>
<td>Direct effect of POS on OE</td>
<td>.221***</td>
<td>.071</td>
<td>.080</td>
</tr>
<tr>
<td></td>
<td>.335***</td>
<td>.107</td>
<td>.112</td>
</tr>
<tr>
<td>Direct effect of OC on OE</td>
<td>.445a</td>
<td>.113</td>
<td>.248</td>
</tr>
<tr>
<td></td>
<td>.455a</td>
<td>.108</td>
<td>.247</td>
</tr>
</tbody>
</table>

Notes. The unstandardized point estimates are followed by the standardized estimates. *p ≤ .10; **p ≤ .05; ***p ≤ .01; *p ≤ .001. Statistical significance of unstandardized effects assessed via phantom model approach (cf. Macho & Ledermann, 2011) and standardized effects assessed via Amos estimand approach (cf. Chen & Hung, 2016). Statistical significance assessed via bias-corrected bootstrap significance tests based on 2,000 bootstrapped samples (cf. Perera, 2013).
Figure 10. Hypothesized Structural Model 1

Figure 11. Alternative Structural Model 2
**Common Method Variance**

The confirmatory factor analysis marker variable technique was used in accordance with Williams, Hartman, and Cavazotte (2010) to assess common method variance. The models constructed included the 7 study variables and the ATCB marker variable (Miller & Chiodo, 2008), which consists of a total of 38 items. The study variables included distributive justice, procedural justice, growth, performance expectations, perceived organizational support, organization engagement, organizational citizenship behavior, and the marker variable attitudes toward the color blue. The use of ATCB as a marker variable has been supported (Simmering et al., 2015) and is deemed theoretically unrelated to the study variables per the guidance of Williams, Hartman, and Cavazotte (2010).

The confirmatory factor analysis baseline model was established and tested by setting the study’s method and substantive latent variables to zero and by changing the unstandardized regression weights and variances to match the values of the CFA model. Model C was then established and tested by setting the factor loadings from the latent marker variable so that they are equal. Model U would be necessary if CMV was present when comparing Model C with the baseline model and would be established and tested by setting the factor loadings from the latent marker to be unconstrained. Finally, Model R would be necessary if the marker variable was equal across the items loading on the substantive factors and would be established and tested by using the substantive factor covariances from either Model C or Model U that would be set to the values found in the baseline model. Model fit indices were reviewed in accordance with Williams, Hartman, and Cavazotte (2010), and each model’s chi-square, degrees of freedom, and comparative
fit indices can be found in Table 15. Analysis of the baseline model against Method C revealed ($\Delta \chi^2 = 0.688$, $\Delta df = 1$, $p = 0.407$) that Method C did not fit statistically better than the baseline model, which is indicative of CMV not being present (Simmering et al., 2015). The presence of CMV was not identified when comparing Method C to the baseline model; therefore, comparison to Method U was deemed unnecessary (Williams et al., 2010).
Table 15

Model Fit Indices and Model Comparisons for CFA Models with Marker Variable

<table>
<thead>
<tr>
<th>Model</th>
<th>$x^2 (df)$</th>
<th>CFI</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>LR of $\Delta x^2$</th>
<th>Model Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFA with marker</td>
<td>1576.143 (651)</td>
<td>0.915</td>
<td>0.058</td>
<td>0.063</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>1585.074 (671)</td>
<td>0.916</td>
<td>0.063</td>
<td>0.061</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Method-C</td>
<td>1584.386 (670)</td>
<td>0.916</td>
<td>0.060</td>
<td>0.061</td>
<td>0.688, $df = 1, p = .407$</td>
<td>vs. Baseline</td>
</tr>
</tbody>
</table>

Note. $\chi^2$ = chi-square. $df$ = degrees of freedom. CFI = Comparative Fit Index. SRMR = standardized root mean residual. RMSEA = root-mean-square error of approximation. LR = likelihood ratio test.
Summary of the Chapter

This chapter presented the results of the data collection and demographics pertaining to the individuals surveyed for this study. The medical coding professionals identified as the sample group were compared to the national Bureau of Labor Statistics data to test for representativeness. The comparative sample provided statistical representation for the variable gender, although the remaining categorical variables from the five state associations did not fit the profile specified by national BLS data. Multivariate assumptions were reviewed, and the tests for normality, skewness, and kurtosis were employed. Several skewness values exceeded the established threshold, kurtosis values fell within specified standards, and the critical ratio of kurtosis exceeded the nonnormality threshold. Resultantly, bootstrapping was utilized, and results were statistically significantly different from non-bootstrapped results; therefore, bootstrapped results were reported. The study variables exceeded the specified parameters for discriminant validity and convergent validity. The 7-factor and 4-factor higher order measurement models and structural models fit indices were subsequently examined. Direct and indirect effects were specified, hypotheses were addressed, and common method variance was tested and determined not to impact the substantive variables used in this study.
Chapter 5 – Discussion

Introduction

This chapter contains six sections. The first section provides a summary of the current study. Section two includes a discussion of the results followed by the study’s implications in section three. The study’s implications are separated into three parts to include the implications for theory, research, and practice. Section four identifies limitations within the study. Section five provides suggestions for future research. The sixth section is the chapter summary.

Summary of the Study

This study was informed by the social cognitive theory (Bandura, 1986) and social exchange theory (Blau, 1964), and posited that employees who cognitively assess and value their working environment resultantly exhibit behaviors that are mutually beneficial to the employee and organization relationship. The interactions of the employee and organization are constantly undergoing evaluation, and it is these valuations that guide behavior (Bandura, 1986). Employees are more likely to exhibit positive effort above and beyond their duties when they feel valued and supported by their organization (Kurtessis et al., 2017), and they attribute their level of engagement with the job and organization differently (Saks, 2006) as their efforts are reflective of their valuation (Zigarmi et al., 2009). The use of a multidimensional (Shuck, 2011) model examined organizational cognition as intervened by perceived organizational support and
organization engagement on medical coders’ exhibition of organizational citizenship behaviors in the context of U.S. healthcare. The following hypotheses guided this study:

**H1:** Organizational cognition has an indirect effect on organization engagement through perceived organizational support while controlling for the direct effect of organizational cognition on organization engagement.

**H2:** Organizational cognition has an indirect effect on employee exhibition of OCBs through organization engagement while controlling for the direct effect of perceived organizational support on organization engagement.

**H3:** Organizational cognition has an indirect effect on employee exhibition of OCBs through perceived organizational support then organization engagement while controlling for the direct effect from organizational cognition on organization engagement.

Hypothesis 1 examined the indirect effect of organizational cognition on organization engagement through perceived organizational support while controlling for the direct effect of organizational cognition on organization engagement, whereas Hypothesis 2 examined the indirect effect of organizational cognition on organizational citizenship behavior through organization engagement while controlling for the direct effect of perceived organizational support on organization engagement. Hypothesis 3 involved the multi-step intervening pathway of organizational cognition on organizational citizenship behaviors through perceived organizational support then organization engagement while controlling for the direct effect from organizational cognition on organization engagement. The hypotheses were supported as discussed in
The results attributed to the study sample of medical coding professionals provide insight into the relationships identified in this study.

The a priori non-experiment survey design used medical coding professionals who were current or past members of the American Health Information Association (AHIMA) in the states of Georgia, Louisiana, Michigan, North Carolina, and South Carolina. This sample was made up of 10,000 medical coding professionals (AHIMA report, 2018) who were classified as full time workers above the age of 18 with the following credentials: Registered Health Information Administrator (RHIA), Registered Health Information Technician (RHIT), Certified Coding Specialist (CCS), Certified Coding Specialist Physician Based (CCS-P), Certified Coding Associate (CCA), Certified Documentation Improvement Practitioner (CDIP), and Certified Health Data Analyst (CHDA). This nonclinical group assists in the treatment and education of patients as technological shifts are placing a greater emphasis on data and the consumer, whereas the delivery of the population’s health and the facilitation of patient engagement is not limited to clinical personnel (Millen, 2015).

The survey participants were contacted via an email distribution list in September and November of 2018 by an AHIMA representative to request their participation. There were 813 respondents who initiated the survey, although after rigorous survey control measures 363 (45%) participants contributed to this study’s data profile. The data in chapter 4 were analyzed and underwent numerous statistical procedures in SPSS and AMOS to assess the multivariate assumptions, the fitting of two measurement models, the examination of related structural models, and the confirmatory marker variable technique (Williams et al., 2010).
Discussion of the Results

This section discusses the results from the study and also provides speculation as to these findings. The use of existing theory and research was included to offer comparison to the findings in this study. Potential literature contributions are mentioned. This section is organized per the study’s hypotheses.

Cognition on Engagement, Intervened by Support - Hypothesis 1

Employee perceptions and consequently their efforts found in the workplace are shaped by social cognitive and social exchange principles (Blau, 1964; Eisenberger et al., 1986; Gouldner, 1960). Organizational cognition as intervened by perceived organizational support on organization engagement while controlling for the direct effect of organizational cognition on organization engagement was found to be statistically and practically significant. The effects found in this study reinforce the importance of the employee and organization relationship. Employees and organizations exchange contributions that are perceived, valued, and acted upon (Rhoades et al., 2001; Zigarmi et al., 2009). The perceptions and valuations attributed to workforce elements in an exchange relationship are ongoing and it is these valuations that influence behavior (Bandura, 1986).

Employees reciprocate effort when they feel that their interests and well-being are represented by the organization, and it is this global belief that underlies their actions (Eisenberger et al., 1986). This study utilized the organizational cognition scale, which consists of the first-order factors of distributive justice, procedural justice, growth, and performance expectations as intervened by perceived organizational support on the outcome of organization engagement. Positioning perceived organizational support as a
mediating variable has shown meta-analytic support with justice perceptions, developmental opportunities, and in-role behaviors (Kurtessis et al., 2017), although measurement scales and constructs offered some variation. Similarly, organizational support has been characterized as a job resource or as an antecedent to engagement (Malinen & Harju, 2017; Rich et al., 2010; Saks, 2006; Sohrabizadeh & Sayfouri, 2014).

The global belief of feeling supported and the intention of engaging in the workplace are influenced by the valuations placed upon workplace factors and relationships. Environments that are distributively and procedurally just, with opportunities for growth, where performance expectations are transparent, contribute toward one’s cognitions related to the organization (Nimon & Zigarmi, 2015b). Specifically, it appears that employees cognitively assess workplace factors and in doing so reciprocate their perceptions of being supported in the form of engagement. Identifying perceived organizational support as an intervening or mediating variable in the context of engagement elevates this global belief of being supported, as in the employee and organization relationship, support cognitions are inherently tied to behavioral outcomes. In addition, cognitive evaluations or perceptions of organizational support may provide a psychological variable that can be situated between job resources and engagement (cf. Saks & Gruman, 2014). Similarly, likening engagement to a marriage (Merriam-Webster, 2016) appropriately frames the contributions and valuations of the employee and organization relationship. This study builds upon the social cognitive and exchange frameworks by evaluating one’s cognitions, support perceptions, and levels of organization engagement.
Cognition on Citizenship Behaviors, Intervened by Engagement - Hypothesis 2

The indirect effect of organizational cognition on organizational citizenship behaviors as intervened by engagement, while controlling for the direct effect of perceived organizational support on organization engagement was found to be statistically and practically significant. Previous studies have examined the effect of the first-order factors of organizational cognition (distributive justice, procedural justice, growth, and performance expectation) on the outcome of organizational citizenship behavior (Ken Blanchard, 2011; Colquitt et al., 2013; Wayne et al., 1997). Similarly, several studies have identified the mediating capacity of engagement measures on the outcome of organizational citizenship behaviors (Rich et al., 2010; Saks, 2006; Sohrabizadeh & Sayfouri, 2014) This study provides empirical support for the higher order factor organizational cognition as intervened by organization engagement on the outcome of organizational citizenship behaviors.

The organizational cognition scale is derived from employee work passion research and represents a second-order factor of the work cognition scale (Nimon & Zigarmi, 2105b). This study extends employee work passion and social exchange research by modeling organizational cognition as a predictor that contributes to engagement and the outcome of organizational citizenship behaviors. The cognitive valuations of the working environment resultantly impact one’s intention and their behavior (Zigarmi et al., 2009). This study is supportive of the thoughts and feelings an individual experiences when evaluating the workplace, as their valuations inform and influence their actions. In addition, this study relies upon the cognitive and social exchanges that take place between employees and their organization (Bandura, 1986;
Blau, 1964; Gouldner, 1960). As identified, it appears that employee cognitions as they relate to the organization have an impact on their perception or level of organization engagement and whether they will acknowledge or exhibit organizational citizenship behaviors. Employees who identify with or exhibit levels of engagement are more likely to exhibit organizational citizenship behaviors (Saks, 2006). Specifically, organizationally centric factors are influenced by individual perceptions, and it is these exchanges that contribute to and define the working employee and organization relationship.

**Cognition on Citizenship Behaviors, Intervened by Support then Engagement - Hypothesis 3**

The hypothesis including organizational cognition as intervened by perceived organizational support and subsequently by organization engagement on organizational citizenship behaviors, while controlling for the direct effect of organizational cognition on organization engagement, was found to be statistically and practically significant. Hypothesis 3 extended Hypothesis 1 by including the indirect path from perceived organizational support through organization engagement on organizational citizenship behaviors. This study acknowledges the close associations of perceived organizational support, measures of engagement, and organizational citizenship behaviors.

The modeling of perceived organizational support and organization engagement as serial intervening variables or mediators was derived from similar relationships identified in previous studies (Biswas & Bhatnagar, 2013; Kurtessis et al., 2017; Malinen & Harju, 2017; Rich et al., 2010; Saks, 2006; Sohrabizadeh & Sayfouri, 2014). Specifically, Rich, LePine, and Crawford (2010) modeled perceived organizational
support as mediated by job engagement on the outcome of organizational citizenship behavior. In similar fashion, Sohrabizadeh and Sayfouri (2014) identified the relationship of organizational and supervisory support as mediated by work engagement on the outcome of organizational citizenship behavior. In addition, Saks (2006) modeled perceived organizational support as mediated by job engagement and organization engagement on the outcome of organizational citizenship behavior. Similarly, Biswas and Bhatnagar (2013) and Malinen and Harju (2017) used variations of Saks’s (2006) measures of job and organization engagement as mediating variables to the antecedent of perceived organizational support. The variables of job and organization engagement are associated with different employee valuations in the workplace.

This study extends existing engagement and exchange research by focusing on organizationally centric measures that rely upon individual valuations, which also characterizes the exchanges in an employee and organization relationship. In addition, using perceived organizational support as a serial intervening variable with organization engagement offers a bridge beyond acknowledging the construct as a job resource that could be present or absent. Specifically, the cognitive-emotional valuations employees undertake in regards to workplace elements assume some level of organizational support either implicitly or explicitly. Furthermore, the inclusion of perceived organizational support with a measure of engagement extends research by acknowledging the presence of both constructs in the employee and organization exchange relationship. Medical coders’ evaluation of organizational cognition is indirectly related to the likelihood they will exhibit organizational citizenship behavior when they are supported by the organization and when they acknowledge or exhibit organization engagement.
Study Implications

This section offers potential contributions to theory, research, and practice as a result of conducting this study. The cognitive and emotional components in decision making were influenced by personal and environmental factors as the survey participants voluntarily assessed the measures employed within this study. The medical coding professionals who participated in this study’s survey provided a data profile with conclusive findings in relation to organizationally centric factors. These implications are discussed.

Theory Implications

Social cognitive theory (Bandura, 1986) and social exchange theory (Blau, 1964) assist in guiding interactions, relationships, and outcomes. Distributive justice, procedural justice, growth, and performance expectation, as first-order factors of the higher order factor organizational cognition, influence employee’s perceptions of feeling supported, level of organization engagement, and the likelihood of exhibiting organizational citizenship behaviors. Employees who value supportive environments are more likely to reciprocate in the form of engagement and behaviors that are mutually beneficial. The presence or perception of organizational support compliments the employee and organization relationship. Similarly, the necessity to exhibit or maximize engagement and organizational citizenship behaviors has reciprocal benefits for the employee and organization. The interactions and contributions found in the employee and organization relationship are ongoing and require assessment and maintenance. Employees are continually processing relationships within the workplace, and while the cognitive and emotional appraisals are intertwined (Zigarmi et al., 2009), the cognitive or
emotional cues may elicit stronger cognitive or emotional responses. Managing these valuations are the responsibility of those in the relationship, particularly as it relates to employees and their organization.

Organizational support and engagement are reciprocally tied as in a relationship or marriage, particularly as it relates to the exchanges that take place between an employee and organization. Employees and organizations contribute quite basically in the form of inputs and outputs in a working relationship. The contributions take on significance when the parties involved can cognitively and emotionally value the relationship beyond mechanistic terms. The maximization of organizational support and organization engagement relies upon the employee and organization, particularly as it is perceived by the employee. This study builds upon the social cognitive and social exchange framework by identifying key organizationally centric factors involved in the working relationship. Complementary mediation (Zhao et al., 2010) as found in this study suggests that the observed effects may benefit by the inclusion of an additional mediator. It would be theoretically appropriate to consider the measure of positive affect as a mediator (cf. Egan, Turner, & Blackman, 2017; Egan, Zigarmi, & Richardson, 2019; Thompson, 2007; Zigarmi et al., 2011) or the measure of perceived supervisor support (Shanock & Eisenberger, 2006) with the relationships identified. Although, the construct of perceived supervisor support may be better served as a predictor (Kurtessis et al., 2017), in consideration of the “global belief” of organizational support and its mediating capacity with cognitive, emotional, and behavioral engagement components.
Research Implications

The significance of modeling organizational cognition as a higher order factor with perceived organizational support and organization engagement as intervening variables on the outcome of organizational citizenship behaviors provided clarity among key organizationally centric variables found in the workplace. The interactions between the employee and organization and the valuation of these contributions are highly personal. In keeping with Nimon and Zigarmi (2015b), modeling the first-order factors of distributive justice, procedural justice, growth, and performance expectation as a higher order factor is further validated. Organizational cognition as a higher order factor extended existing research as modeled with perceived organizational support, organization engagement, and organizational citizenship behavior. The positive valuation of organizational cognition lends itself to acknowledging the presence of organizational support in the form of engagement and organizational citizenship behavior. The indirect effects between organizational cognition with organization engagement through perceived organizational support, from organizational cognition with organizational citizenship behaviors through organization engagement, and from organizational cognition with organizational citizenship behaviors through perceived organizational support and subsequently through organization engagement can tentatively be accepted, which would be appropriate for cross-validation in a future study (cf. Kline, 2016).

In addition, theoretically identifying and modeling perceived organizational support as a serial intervening variable with a measure of engagement provides a psychological bridge between job resources, engagement, and outcome measures (cf.
Perceived organizational support as an individual level variable assigns value in the form of a belief as to whether an organization cares for one’s well-being (Eisenberger et al., 1986). The cognitions and emotions individuals undergo in evaluating an organization are influenced by existing mindsets and capabilities. In addition, it is these thoughts and emotions that influence one’s intentions and their resultant behaviors (Bandura, 1986; Zigarmi et al., 2009).

The identification of cognitions, emotions, and behaviors in the context of the workplace or engagement research should involve the contributions of the organization, even if those contributions are through the subjective lens of the employee. In the spirit of contributing to a relationship, employees and organizations bear mutual responsibility for the existing state of support, engagement, and other mutually beneficial outcomes. Furthermore, engagement research should identify the explicit psychological relationship with perceived organizational support. The incorporation of perceived organizational support and measures of engagement as serial mediators affords researchers the opportunity to examine the employee and organization relationship in order to facilitate mutual outcomes.

Perceived organizational support was explicitly modeled in this study and showed strong correlations with organizational cognition and organization engagement. In addition, perceived organizational support had a significant direct effect with organization engagement. Perceived organizational support can be acknowledged or identified as implicit in an employee’s cognitive and emotional valuation of their work environment (cf. Eisenberger et al., 1986; Zigarmi et al., 2009). Saks and Gruman (2014) emphasized that there were no psychological variables that can intervene between job
resources and engagement. Identifying perceived organizational support as a job resource perhaps diminishes the inherently psychological process an individual undergoes in evaluating their work environment and desire for reciprocation. Specifically, employees reciprocate behavioral effort in the presence of organizational goodwill and support. In the context of this study, employees are more likely to exhibit organizational citizenship behavior in the presence of organizational cognition, as cognitions impact one’s perception of support and their level of organization engagement. The presence of being supported by the organization lends itself to reciprocating in the form of engagement and organizational citizenship behaviors.

**Practice Implications**

The cognitive and emotional processing of working relationships and the valuation of workforce factors relies upon the intimate rationalization of the individual, who, however, can be strategically influenced by efforts attributed to the organization. Organizations that value their employees acknowledge the need to maintain a conducive working environment that is positively received by their employees. Providing an environment in which employees are supported, engaged, and capable of exhibiting behaviors that go above and beyond existing duties can be established and maintained. This study lends support to key organizational factors and suggests that medical coders’ evaluation of organizational cognition influences the support they perceive from the organization, which impacts their level of organization engagement and the likelihood of exhibiting organizational citizenship behaviors on behalf of the organization.

Employees’ cognitions and emotions in response to workforce elements rely upon the interaction and goodwill in the employee and organization relationship. An
environment that is identified as distributively just, procedurally just, offering growth opportunities, and one where performance expectations are present, depends upon the contributions of both employees and leadership. Employees perceive that the organization is supportive of them in the presence of organizational cognition. This study’s findings acknowledge the strong correlative relationships, direct effects, and indirect effects between organizational cognition, perceived organizational support, organization engagement, and organizational citizenship behaviors. Practitioners may heed the significant findings of this study and specifically design interventions that acknowledges employees’ evaluation of organizational cognition, their perceptions of organizational support, and current levels of engagement to maximize mutually satisfying objectives, such as organizational citizenship behaviors. Specifically, involving employees in the design of the intervention could initiate a dialogue in developing, maintaining, or reinforcing a desired workplace environment that is mutually beneficial.

Practitioners who are interested in employees’ cognitions, emotions, and intentions should ask them or provide a mechanism to obtain their feedback. Seeking to reinforce a workplace that is distributively and procedurally just, has growth opportunities, and that identifies performance expectations, requires a baseline or assessment of the current organizational climate. The identification of the current reward, incentive, and allocation structure; policies and procedures; opportunities for development within a job, department, and the organization; and the measurement of performance would be suitable areas for discussion. Transparency with this process may identify available parameters and resources, achievable goals and objectives, the establishment of a time frame from start to implementation, metrics for effectiveness, a
communication plan, and continuous feedback. It is feasible that an appraisal or performance evaluation structure could identify and measure key organizational elements to reinforce a desired workforce environment. The valuations of employee and organizational contributions and desired outcomes requires dialogue, maintenance, and ongoing support and effort.

This study is particularly relevant to U.S. medical coding employees who make up a section of the nonclinical personnel in facilities such as hospitals, ambulatory clinics, physician practices, as well as government and educational settings. Healthcare practitioners may acknowledge the utility of organization-centric measures when assessing employee’s cognitions, attitudes, and behaviors. The necessity to measure, recognize, and maximize levels of support, engagement, and citizenship behaviors serves the employee and organization in fostering mutually beneficial outcomes. Healthcare environments with engaged employees have shown positive organizational and patient outcomes such as increased quality of care, patient safety, patient satisfaction, and improved mortality measures (Bulkapuram et al., 2015; Lowe, 2012; Thorp et al., 2012). Engaged employees have shown rational, emotional, and behavioral attachments to their job and also the organization (Lowe, 2012). Positive employee valuations of specific organizational factors can improve the workplace environment and have reciprocal effects upon coworkers, consumers, and other environmental stakeholders.

The employee and organization relationship is constantly being assessed, and these judgments contribute to the actions of the employee on behalf of the organization. Positive social exchanges or the valuation of a positive support environment reinforces the likelihood an employee reciprocates in the form of positive effort (Cropanzano &
Mitchell, 2005; Eisenberger et al., 1986). Organizations such as healthcare facilities must improve the cognitive and emotional valuations of their employees in order to foster a reciprocally beneficial environment for the patients who are served. The patient experience is impacted by clinical and nonclinical employees, and in dealing with one’s health it is expected that employees are not only engaged but exceed the expectations of those they serve. The provision of healthcare must meet established regulatory and credentialing requirements, and the employees providing care should passionately foster the desire to go beyond these requirements.

Practitioners may identify that employees engage differently in relation to the job and organization (Saks, 2006). The facilitation of organizational support is important to employees and contributes toward their engagement and likelihood of additional positive outcomes. The modeling of perceived organizational support and organization engagement provides an organization-centric focus in relation to organizational citizenship behaviors. The indirect effects provide some guidance for utilizing the valuations of organizational support with organization engagement. Targeted interventions would seek to improve employee valuations of the support they perceive and engagement that is attributed to the organization. The assessment of organization engagement in concert with perceived organizational support seeks out employee valuations beyond those of a task, role, or job. These valuations are an important distinction when considering the intertwined contributions of the employee and the organization.

The contributions of the employee and organization are akin to a marriage, and the fostering of the relationship requires the ongoing maintenance and valuation of the
contributions. Similarly, the perception of organizational support is assessed or valued over time by the employee and impacts the level or exhibition of engagement. Perceived organizational support is conceptually inherent or explicitly intertwined with engagement and contributes to mutually beneficial outcomes of the employee and organization. Practitioners may find it difficult to isolate key cognitions and attitudes of the employee, although measuring and reinforcing the perception of organizational support and level of engagement serves both the employee and organization.

Limitations

This study involved full-time medical coding professionals who were 18 years of age or older and current or past members of the state associations of AHIMA corresponding to the following states: Georgia, Louisiana, Michigan, North Carolina, and South Carolina. Generalizability beyond this group is limited, and the findings of this study can be contextually related to these parameters. The a priori non-experiment study involved a cross-sectional survey which limited the ability to draw causal conclusions (Bryman & Bell, 2015; Kline, 2016). The availability of the sample population and the associations’ demographic data were limited; therefore, a design incorporating objective metrics for comparison was not possible. In addition, technical support and access to the sample group were restricted due to time constraints imposed by impending seasonal regulations and business requirements. The pilot study used in this study was for the purposes of identifying any logistical problems prior to the full survey rollout. The time frame between the pilot study and full survey rollout was very narrow, and the collection of a limited number of responses in the pilot did not facilitate changes in the study’s substantive variables.
In the context of social desirability, respondents might be inclined to answer questions to appease or seek validation of the response they believe to be acceptable (Bryman & Bell, 2015). The measurement scales used in this study were not modified and were reflective of the studies citing their use, and communications to participants were from a representative of AHIMA. Therefore, the potential impact of social desirability was limited but possible, given the relationship that participants had with the AHIMA representative. In addition, acquiescence, which is referred to as yea-saying or nea-saying, is another form of self-report bias that consists of respondents answering a particular way without regard for the content (Bryman & Bell, 2015). This study incorporated several design elements to reduce bias and determine the impact of common method bias to include the CFA marker technique (Podsakoff et al., 2003; Williams et al., 2010).

**Future Research Suggestions**

Workplace research examining the interactive exchange between the employee and organization may identify organizational factors in conjunction with employee contributions to maximize mutual outcomes (Kurtessis et al., 2017; Saks & Gruman, 2014). The higher order factor of organizational cognition adequately represented cognitions in the workplace and provided significant correlations, direct effects, and indirect effects with perceived organizational support, organization engagement, and organizational citizenship behaviors. Future studies of engagement should identify the inherent and explicit link between an employee’s cognitive, emotional, and behavioral environment in relation to their perceptions of organizational support. Environments of organizational support vary in strength and perceived level of importance, although
support is inextricable from the workplace environment and the valuation attributed to the organization.

Studies identifying organization-centric variables in the workplace should incorporate measures that elicit an individual response that is reflective of the exchange between the employee and organization. Future research should present robust models that situate perceived organizational support and various types of engagement as mediating variables with the aim of specifying mutual outcomes. The acknowledgement of organizational support and engagement as inseparable valuations in the workplace elevates the importance of the employee and organization relationship. The use of perceived organizational support as a moderating variable to engagement using the Job Engagement Scale (Alfes et al., 2013; Rich et al., 2010) has seen promise, and further specification in the context of moderation or mediation is warranted. The contributions of the employee and organization are evaluated when the relationship is formed, as valuations fluctuate, and ongoing maintenance is required for which both parties bear a responsibility. Strategic organizational practices or those extending transactional HRD processes serve to benefit the employee and organization. The meaning and measurement of what it means to be in an employee and organization relationship requires input, assessment, and feedback to specify what is mutually important and beneficial for those represented.

The interchangeable use of various types of engagement (i.e., job engagement, work engagement, organization engagement), definitions, and their measurement have clouded development and practice (Shuck et al., 2017). Shuck, Osam, Zigarmi, and Nimon (2017) provided an operational definition which is stated “as a positive, active,
work-related psychological state operationalized by the maintenance, intensity, and
direction of cognitive, emotional, and behavioral energy” (p. 269). This definition
provides clarity for themes across the construct and is consistent with the symbiotic
exchange between the employee and organization. Specifically, the work-related
psychological state involves the interaction between individual and organizational
contributions that are valued and acted upon (cf. Eisenberger et al., 1986; Zigarmi et al.,
2009). Researchers that acknowledge these contributions may provide theoretical
grounding in their conceptualization or definition of what it is to be engaged and how it
should be measured. Consistent with the positive psychology movement, examining the
positive psychological state in the context of the work environment, it is pertinent to
examine psychological well-being as a mutual employee and organization proposition
(cf. Joo, Zigarmi, Nimon, & Shuck, 2017; Nimon et al., 2016).

The values, mindset, and skills an employee brings into the relationship
undergoes transformation in the presence of new information or stimuli (Bandura, 1986).
Examination of the job context, organizational support, and relationship with coworkers
and leaders have influence upon an employee’s engagement and psychological well-
being (Joo et al., 2017). Employees associate their managers or leadership as direct
representatives of the organization, and therefore research targeting the interactions
between individuals and their leaders offers promise for individual and organizational
level outcomes (Shanock & Eisenberger, 2006). Affect- and cognition-based trust in
one’s leader had a significant impact on employees’ work intentions (Zigarmi, Nimon, &
Conley, 2018). Similarly, studies rooted in employee work passion have modeled positive
affect as a mediating variable to leadership oriented predictors and work intentions (Egan
et al., 2017; Egan et al., 2019; Zigarmi et al., 2009). In addition to modeling leadership factors, an appropriate direction for researchers would be to consider perceived organizational support, measures of engagement, and affect as mediating variables, with the additional items included in the revised version of the Work Cognition Inventory and the Work Intention Inventory Short-Form (WCI-R, Nimon & Zigarmi, 2015b; WII-SF, Nimon & Zigarmi, 2015a). Lastly, the contributions of the individual in the form of motivation, motivational outlooks, and locus of control provide an avenue for examination in the context of the employee and organization relationship (Shuck, Peyton Roberts, & Zigarmi, 2018; Zigarmi, Galloway, & Roberts, 2018; Zigarmi, Roberts, & Shuck, 2018).

**Summary of the Chapter**

Chapter 5 provided a summary of the study, which included an introduction of a multi-dimensional model, the study hypotheses, study design, sample group, and analyses. This was followed by a discussion of the study’s results. Study implications composed of three parts to include research implications, theory implications, and practice implications were addressed. Limitations of the study were identified and future research suggestions was provided. The chapter concluded with a summary.
References


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Occupational code; Related industry; Growth: https://www.bls.gov/ooh/healthcare/medical-records-and-health-information-technicians.htm#tab-6


Occupational wages: https://www.bls.gov/oes/current/oes292071.htm


Sector: https://www.bls.gov/iag/tgs/iag62.htm


Carrell, W. S. (2018). Examining the mediating influence of occupational self-efficacy and perceived organizational support on the relationship between perceived managerial coaching behaviors and employee engagement among higher education enrollment management professionals. Human Resource Development Theses and Dissertations, Scholar Works at UT Tyler. The University of Texas at Tyler, Tyler, TX.

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Appendix A – Informed Consent and IRB Approvals

Welcome to this survey about workplace perceptions. The purpose of this research project is to identify whether certain situations exist in the workplace. Your participation is entirely voluntary, confidential, and anonymous. If you do not wish to participate in this survey, you may exit out at any time by closing your browser.

The survey will consist of multiple choice selections regarding your perceptions of work. The survey will take approximately 10 minutes to complete. Please read each question or statement and select the best answer. There are no right or wrong responses in regards to your opinion. Be advised that there are questions in the survey that ask you to select a specific response, please do so to avoid being removed from the survey.

Please complete all items on the page which may require you to scroll to the bottom. Select the button on the bottom right to advance the survey. No identifiable information will be collected such as: your name, department, email address, computer number, etc. This survey should not produce any side effects or risks by participating. The results collected will be used for scholarly purposes.

ELECTRONIC CONSENT: Please read and select below.

By selecting the "Agree" button below you are agreeing that:

You have read the information above, are at least 18 years of age, and are a voluntary participant.

If you do not wish to participate in this survey for any reason, please select the "Decline" option.
August 30, 2018

Dear Mr. Conley,

Your request to conduct the study: Organizational Cognitions as Intervened by Organizationally Centric Factors on Employees’ Exhibition of Organizational Citizenship Behaviors, IRB # F2018-02 has been approved by The University of Texas at Tyler Institutional Review Board as a study exempt from further IRB review. This approval includes a waiver of signed, written informed consent. In addition, please ensure that any research assistants are knowledgeable about research ethics and confidentiality, and any co-investigators have completed human protection training within the past three years, and have forwarded their certificates to the IRB office [G. Duke].

Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter:

- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity
- Prompt reporting to the UT Tyler IRB and academic department administration will be done of any unanticipated problems involving risks to subjects or others
- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.
- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

Gloria Duke, PhD, RN
Chair, UT Tyler IRB
September 17, 2018

Dear Mr. Conley,

Your request to conduct the study: Organizational Cognitions as intervened by Organizational Support and Engagement on Employees Exhibition or Organizational Citizenship Behaviors, IRB # Fall 2018-12 has been approved by The University of Texas at Tyler Institutional Review Board as a study exempt from further IRB review. This approval includes a waiver of signed, written informed consent. In addition, please ensure that any research assistants are knowledgeable about research ethics and confidentiality, and any co-investigators have completed human protection training within the last three years, and have forwarded their certificates to the IRB office (G. Duke).

Please review the UT Tyler IRB Principal Investigator Responsibilities, and acknowledge your understanding of these responsibilities and the following through return of this email to the IRB Chair within one week after receipt of this approval letter:

- Prompt reporting to the UT Tyler IRB of any proposed changes to this research activity
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- Suspension or termination of approval may be done if there is evidence of any serious or continuing noncompliance with Federal Regulations or any aberrations in original proposal.
- Any change in proposal procedures must be promptly reported to the IRB prior to implementing any changes except when necessary to eliminate apparent immediate hazards to the subject.
- Exempt with signed waiver of consent

Best of luck in your research, and do not hesitate to contact me if you need any further assistance.

Sincerely,

Gloria Duke, PhD, RN
Chair, UT Tyler IRB
TITLE: Monte Carlo simulation for structural path model

MONTECARLO: NAMES ARE A1-A3 B1-B3 C1-C3 D1-D3 E1-E8 S1-S6 G1-G4;
N O B S E R V A T I O N S = 305;
NREPS = 10000;
SEED = 53473;
NGROUPS = 1;

MODEL POPULATION:

F1 BY A1-A3*.65; ! DJ
F2 BY B1-B3*.65; ! PJ
F3 BY C1-C3*.65; ! GR
F4 BY D1-D3*.65; ! PE
F5 BY F1-F4*.65; ! OC
F6 BY E1-E8*.65; ! POS
F7 BY S1-S6*.65; ! OE
F8 BY G1-G4*.65; ! OCB

F1@.58;
F2@.58;
F3@.58;
F4@.58;
F5@1.0; ! sets factor variance
F6@.83; ! sets residual factor variance
F7@.61;
F8@.82;

[F1-F8@0]; ! sets factor means to 0

A1-A3*.5775;
B1-B3*.5775;
C1-C3*.5775;
D1-D3*.5775;
E1-E8*.5775;
S1-S6*.5775;
G1-G4*.5775;

F8 ON F7*.42; ! Sets regressive path
F7 ON F5*.26; ! beta
F7 ON F6*.48; ! beta
F6 ON F5*.41;

[A1-A3@0]; ! sets indicator intercepts to 0
[B1-B3@0];
[C1-C3@0];
[D1-D3@0];
[E1-E8@0];
[S1-S6@0];
[G1-G4@0];

MODEL:
F1 BY A1-A3*.65;
F2 BY B1-B3*.65;
F3 BY C1-C3*.65;
F4 BY D1-D3*.65;
F5 BY F1-F4*.65;
F6 BY E1-E8*.65;
F7 BY S1-S6*.65;
F8 BY G1-G4*.65;

F1@.58;
F2@.58;
F3@.58;
F4@.58;
F5@1.0;
F6@.83;
F7@.61;
F8@.82;

[F1-F8@0];

A1-A3*.5775;
B1-B3*.5775;
C1-C3*.5775;
D1-D3*.5775;
E1-E8*.5775;
S1-S6*.5775;
G1-G4*.5775;

F8 ON F7*.42;
F7 ON F5*.26;
F7 ON F6*.48;
Appendix B – Mplus Structural Path Model Script (Continued)

F6 ON F5*.41;

[A1-A3@0];

[B1-B3@0];
[C1-C3@0];
[D1-D3@0];
[E1-E8@0];
[S1-S6@0];
[G1-G4@0];

Model Indirect:
F8 IND F7 F6 F5*.08;
F8 IND F7 F5*.11;

OUTPUT: TECH9;
Appendix C – Survey

Do you work in medical coding, supervise medical coders, or does your job require you to interpret, audit, or ensure medical codes are accurate?

If any of the above apply, please answer yes.

- Yes
- No

Please select the option pertaining to the year you were born:

- Less than 15 years of age
- At least 15 years of age and born after 1961
- Born between 1950 and 1961
- Born between 1946 and 1964
- Born before 1946
Appendix C – Survey (Continued)

Are you a current or past member of AHIMA (American Health Information Management Association)?

- Yes
- No

How many hours a week do you work?

- Less than 20
- Between 20 and 39
- 40 hours or more

Where do you live?

- United States
- Europe
- Asia
- Australia
- Africa
- South America
Welcome to this survey about workplace perceptions. The purpose of this research project is to identify whether certain situations exist in the workplace. Your participation is entirely voluntary, confidential, and anonymous. If you do not wish to participate in this survey, you may exit out at any time by closing your browser.

The survey will consist of multiple choice selections regarding your perceptions of work. The survey will take approximately 10 minutes to complete. Please read each question or statement and select the best answer. There are no right or wrong responses in regards to your opinion. Be advised that there are questions in the survey that ask you to select a specific response, please do so to avoid being removed from the survey.

Please complete all items on the page which may require you to scroll to the bottom. Select the button on the bottom right to advance the survey. No identifiable information will be collected such as: your name, department, email address, computer number, etc. This survey should not produce any side effects or risks by participating. The results collected will be used for scholarly purposes.

ELECTRONIC CONSENT: Please read and select below.

By selecting the "Agree" button below you are agreeing that

You have read the information above, are at least 18 years of age, and are a voluntary participant.

If you do not wish to participate in this survey for any reason, please select the "Decline" option.

☐ Agree

---

<table>
<thead>
<tr>
<th>To no extent</th>
<th>To a little extent</th>
<th>To some extent</th>
<th>To a great extent</th>
<th>To the full extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>This organization offers me options for discussing my future developments needs and interests.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
</tr>
<tr>
<td>I can chart my future career path in this organization.</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
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<tr>
<td>I have opportunities to develop new skills to do my present job.</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
<td>☒</td>
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<tr>
<td>Please select To some extent.</td>
<td>☐</td>
<td>☐</td>
<td>☒</td>
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</tbody>
</table>
Appendix C – Survey (Continued)

To what extent do the following conditions exist within your organization? There are no right or wrong answers, please select the best one that applies.

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<td>The “perks” this organization offers me are given in proportion to the effort I expend.</td>
<td>☐</td>
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<tr>
<td>My hard work will usually result in fair payback.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>I think there is an equal exchange between my effort and my compensation.</td>
<td>☐</td>
<td>☐</td>
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<th>To a great extent</th>
<th>To the full extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am expected to meet agreed upon standards.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>I know the minimum acceptable output events for my work.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>My expected level of performance is clearly defined.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

To what extent do the following conditions exist within your organization? There are no right or wrong answers, please select the best one that applies.

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<th>To a great extent</th>
<th>To the full extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decisions, policies, and procedures are fair and consistently applied to all.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Leaders in this organization use procedures that reduce bias in decision making as much as possible.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>An organizational norm here is to give people a say in decisions that are reached.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Appendix C – Survey (Continued)
Appendix C – Survey (Continued)
Appendix C – Survey (Continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Sometimes</th>
<th>Occasionally</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend functions that are not required but that help the organizational image</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Offer ideas to improve the functioning of the organization</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Take action to protect the organization from potential problems</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Defend the organization when other employees criticize it</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Would you consider yourself a:
- Manager/Supervisor
- Non-Manager
- Executive leader

What type of work setting do you perform your duties?
- Hospital
- Health clinic, ambulatory setting, or private practice
- Other setting

Please indicate your salary range:
- Less than $25,010 annual
- $25,011 - $35,100 annual
- $35,101 - $64,910 annual
- $64,911 +
Appendix C – Survey (Continued)

Choose one or more races that you consider yourself to be:

- [ ] White
- [ ] Hispanic or Latino
- [ ] Black or African American
- [ ] Other

What is your sex?

- [ ] Male
- [ ] Female

Please select any credential(s) you hold from the list below:

- [ ] RHIA
- [ ] RHIT
- [ ] CCS
- [ ] CCS-P
- [ ] CCA
- [ ] CDIP
- [ ] CHDA
- [ ] None of the above

Which state do you perform your duties related to medical coding

- [ ] Georgia
- [ ] Louisiana
- [ ] Michigan
- [ ] North Carolina
- [ ] South Carolina
- [ ] Other

0% 100%
Appendix D – Measurement Scales, Permissions, and Demographics

Work Cognition Inventory – Revised (WCI-R), Organizational Cognition scale, 6 point Likert scale, 1 “to no extent” and 6 “to the full extent” (Nimon & Zigarmi, 2015b); ©2009 The Ken Blanchard Companies. All rights reserved. Do not duplicate.

Distributive justice (DJ)
1. The “perks” this organization offers me are given in proportion to the effort I expend.
2. My hard work will usually result in fair payback.
3. I think there is an equal exchange between my effort and my compensation.

Procedural justice (PJ)
1. Decisions, policies, and procedures are fairly and consistently applied to all.
2. Leaders in this organization use procedures that reduce bias in decision making as much as possible.
3. An organizational norm here is to give people a say in decisions that are reached

Growth (GR)
1. This organization offers me options for discussing my future developments needs and interests.
2. I can chart my future career path in this organization.
3. I have opportunities to develop new skills to do my present job.

Performance expectations (PE)
1. I am expected to meet agreed upon standards.
2. I know the minimum acceptable output levels for my work.
3. My expected level of performance is clearly defined.

From: Kim Nimon <knimon@uttyler.edu>
Sent: Monday, September 3, 2018 10:30 AM
To: David Conley
Cc: dawconley@hotmail.com
Subject: Re: Request Permission to use the Organizational-Cognition Measure

Hi David

You have permission to use the instrument for the purpose of collecting data for your dissertation.

Kim

Kim Nimon, PhD.
Associate Professor
Department of Human Resource Development
Soules College of Business
University of Texas at Tyler

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Appendix D – Measurement Scales, Permissions, and Demographics (Continued)

3900 University Blvd. - COB 315.14
Tyler, TX 75799
903-565-5833 (office)
903-565-5650 (fax)
214-675-4872 (cell)
knimon@uttyler.edu
Skype: knimon1
Zoom: https://uttyler.zoom.us/my/knimon
To make appointments online, see http://profnimon.com/schedule

Human Resource Development Quarterly, Co-Editor
A Thompson Reuters SSCI Listed Journal

From: David Conley
Sent: Monday, September 3, 2018 7:03 AM
To: Kim Nimon
Cc: davidwconley@hotmail.com
Subject: Request Permission to use the Organizational-Cognition Measure

Dr. Nimon,

Hope this finds you well. Per our previous correspondence, I am writing to request permission to use the Organizational-Cognition measure as identified below.

Work Cognition Inventory – Revised (WCI-R), Organization Cognition scale, 6 point Likert scale, 1 “to no extent” and 6 “to the full extent” (Nimon & Zigarmi, 2015b); ©2009 The Ken Blanchard Companies. All rights reserved. Do not duplicate.

Distributive justice (DJ)
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2. My hard work will usually result in fair payback.
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3. I have opportunities to develop new skills to do my present job.

Performance expectations (PE)
1. I am expected to meet agreed upon standards.
2. I know the minimum acceptable output levels for my work.
3. My expected level of performance is clearly defined.

Your permission and response is appreciated. Thank you in advance.
David

The Attitudes Toward the Color Blue, 7 point Likert scale, 1 “strongly disagree” and 7 “strongly agree” (Miller & Chiodo, 2008); ©2008 Brian K. Miller & Beverly Chiodo. All rights reserved. Do not duplicate.

I prefer blue to other colors.
I think blue cars are ugly.
I like the color blue.
I don’t think blue is a pretty color.
I like blue clothes.
I don’t like blue clothes.
I hope my next car is blue.
I really don’t like the color blue.

From: Miller, Brian <bkmiller@txstate.edu>
Sent: Wednesday, September 12, 2018 10:36 AM
To: David Conley
Cc: davidwconley@hotmail.com
Subject: Re: Permission Request - Blue Attitude measure

Hi David,
Yes, of course you can use it. I’m working with Marcia Simmering on a refined version of that scale now.
Best Regards,
Brian

-------------------------------------------------------
Appendix D – Measurement Scales, Permissions, and Demographics (Continued)

San Marcos, TX 78666
Tel: 512-245-7179
Fax: 512-245-2850
Associate Editor: Group and Organization Management
My YouTube Channel: https://www.youtube.com/c/DrBrianKMiler

On Sep 12, 2018, at 8:59 AM, David Conley <dconley3@patriots.uttyler.edu> wrote:

Dr. Miller,

Hope this message finds you well. A number of my cohort colleagues have mentioned the use of the blue attitude marker measure you developed to detect CMV.

I am a doctoral student at The University of Texas at Tyler and am hoping to rollout my study survey very soon. Would you kindly provide me permission to use this instrument for the purpose of conducting dissertation research?

Thank you for your consideration.
David Conley

Survey of Perceived Organizational Support, 7 point Likert scale, 1 “strongly disagree” and 7 “strongly agree” (Rhoades et al., 2001; Eisenberger et al., 1986); ©2001 American Psychological Association.

1. My organization really cares about my well-being.
2. My organization strongly considers my goals and values.
3. My organization shows very little concern for me. (R)
4. My organization cares about my opinions.
5. My organization is willing to help me if I need a special favor.
6. Help is available from my organization when I have a problem.
7. My organization would forgive an honest mistake on my part.
8. If given the opportunity, my organization would take advantage of me. (R)
Appendix D – Measurement Scales, Permissions, and Demographics (Continued)

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Federal Tax ID: 53-0205890
Date: December 11, 2015
IN MAKING PAYMENT REFER TO THE ABOVE INVOICE NUMBER

IF THE TERMS STATED BELOW ARE ACCEPTABLE, PLEASE SIGN AND RETURN ONE COPY TO APA. RETAIN ONE COPY FOR YOUR RECORDS. PLEASE NOTE THAT PERMISSION IS NOT OFFICIAL UNTIL APA RECEIVES THE COUNTERSIGNED FORM AND ANY APPLICABLE FEES.

Request is for the following APA-copyrighted material: Scale Content

Perceived Organizational Support items from:


For the following use: **Non-Commercial Research or Educational Use** in: a) thesis or dissertation research (such as data collection or surveys) via an online password-protected web site and/or in hardcopy format; and b) print and/or digital versions of the final thesis or dissertation document provided that digital distribution is limited to non-commercial, secure and restricted web site(s).

File: Conley, David (author)

Permission is granted for the nonexclusive use of APA-copyrighted material specified on the attached request contingent upon fulfillment of the conditions indicated below:
Organization engagement scale, 5 point Likert scale, 1 “strongly disagree” and “strongly agree” (Saks, 2006); ©2006 Emerald Group Publishing Limited 0263-3946.

Being a member of this organization is very captivating. One of the most exciting things for me is getting involved with things happening in this organization. I am really not into the “goings-on” in this organization (R). Being a member of this organization make me come “alive.” Being a member of this organization is exhilarating for me. I am highly engaged in this organization.
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**All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.**

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<tr>
<td>The requesting person/organization is:</td>
<td>David Conley</td>
</tr>
<tr>
<td>Title of the article or chapter the portion is from</td>
<td>Saks</td>
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<td>Editor of portion(s)</td>
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<td>Author of portion(s)</td>
<td>Saks</td>
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</table>
Appendix D – Measurement Scales, Permissions, and Demographics (Continued)

OCBO scale – organizational citizenship behaviors direct toward the organization, 5 point Likert scale, 1 “never” and 5 “always” (Lee & Allen, 2002; Saks, 2006) ; ©2006 Emerald Group Publishing Limited 0263-3946.

Attend functions that are not required but that help the organizational image.
Offer ideas to improve the functioning of the organization.
Take action to protect the organization from potential problems.
Defend the organization when other employees criticize it.
Appendix D – Measurement Scales, Permissions, and Demographics (Continued)

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<td>Title or numeric reference of the portion(s)</td>
<td>Organization Engagement measure; Organizational Citizenship Behavior toward the Organization measure; $</td>
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Would you consider yourself a member of:

Manager/Supervisor  
Non-Manager  
Executive Leadership

What type of work setting do you perform your duties?

Hospital  
Health clinic, ambulatory setting, or private practice  
Other setting
Appendix D – Measurement Scales, Permissions, and Demographics (Continued)

Please indicate your salary range:

- Less than $25,810 annual
- $25,811 - $39,180 annual
- $39,181 - $64,610 annual
- $64,611 +

Choose one or more races that you consider yourself to be:

- White
- Black or African American
- Asian
- Hispanic or Latino
- Other

What is your sex?

- Male
- Female

Please select any credential(s) you hold from the list below:

- RHIA
- RHIT
- CCS
- CCS-P
- CCA
- CDP
- CHDA
- None of the above

Which state do you perform your duties related to medical coding:

- Georgia
- Louisiana
- Michigan
- North Carolina
- South Carolina
- Other
Appendix E – Participant Letter

Date: 00/00/18

Good morning,

Recently, I was contacted by David Conley a student at the University of Texas at Tyler who is completing his academic studies. David has created a workplace opinion survey and is interested in studying medical coding professionals.

This is a 10 minute survey that is completely voluntary, confidential, and anonymous. None of the information collected will be identifiable and will only be used for scholarly purposes. After David has compiled the survey information, he would gladly share his study’s results with us.

Please take the time to complete this survey as it will be available for two weeks only.

David is very motivated to finish his degree, so please help him out.

Click on the following link: https://www.

If you have any questions or concerns, you may contact David at 281-210-7760, or dconley3@patriots.uttyler.edu or Dr. Gloria Duke, the Director of UT Tyler Center for Ethics at 903-566-7023, or gduke@uttyler.edu

Name
Title
Contact information
Follow-up message:

Good morning,

This is a friendly reminder to complete the workplace opinion survey. Again, this survey is voluntary, confidential, and no identifiable information will be collected. David Conley is a student at the University of Texas at Tyler and would like to finish up his degree program.

The short 10 minute survey can be completed by clicking on the following link: https://www.

Should you have any questions or concerns, please contact David at 281-210-7760, or dconley3@patriots.uttyler.edu or Dr. Gloria Duke, the Director of UT Tyler Center for Ethics at 903-566-7023, or gduke@uttyler.edu

Thank you,
Name
Appendix F – Clean Data Syntax

##Set working directory
setwd("/Users/David/Desktop")

##Install and load libraries
install.packages("psych", dependencies=TRUE)
install.packages("car")
library(foreign, pos=4)
library(psych)
library(car)
library(dplyr)

##Read in datasets
ds <-
  read.table("FullMedCodingSurvey.csv",
    header=TRUE, sep="", na.strings="NA", dec=".", strip.white=TRUE)

##Look at dataset and column names
head(ds)
names(ds)

##See total responses
nrow(ds)

##Create variable to indicate which rows to delete
ds$Delete <- "Hold"

##Did not pass qualification questions
table(ds$QQ1,useNA="ifany")
d$Delete[(ds$Delete=="Hold") & (ds$QQ1!=5)] <- "Qual1"
table(ds$Delete)

table(ds$QQ2,useNA="ifany")
d$Delete[(ds$Delete=="Hold") & (ds$QQ2!=1)] <- "Qual2"
table(ds$Delete)

table(ds$Generation,useNA="ifany")
d$Delete[(ds$Delete=="Hold") & (ds$Generation==1)] <- "Qual3"
table(ds$Delete)

table(ds$QQ4,useNA="ifany")
d$Delete[(ds$Delete=="Hold") & (ds$QQ4!=3)] <- "Qual4"
table(ds$Delete)
table(ds$QQ5,useNA="ifany")
ds$Delete[(ds$Delete=="Hold") & (ds$QQ5!=1)]<-"Qual5"
table(ds$Delete)

##Did not consent
table(ds$IC,useNA="ifany")
ds$Delete[(ds$Delete=="Hold") & (ds$IC!=1)]<-"Consent"
table(ds$Delete)

##Did not pass IMC
table(ds$IMC1,useNA="ifany")
ds$Delete[(ds$Delete=="Hold") & (ds$IMC1!=3)]<-"Check1"
table(ds$Delete)

table(ds$IMC2,useNA="ifany")
ds$Delete[(ds$Delete=="Hold") & (ds$IMC2!=4)]<-"Check2"
table(ds$Delete)

ds$Time<-ds$Duration..in.seconds./60
names(ds)
dsclean<-subset(ds[,18:73], Delete=="Hold")
nrow(dsclean)
names(dsclean)

dsclean<- dsclean[c(1,2,3,4,5,6,16,27,7,8,9,10,11,12,13,14,15,17,18,19,20,21,22,23,24,25,26,28,29, 30,31,32,33,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56)]
clean<-dsclean%>%filter(complete.cases(.))
nrow(clean)

##Average completion time after incompletes removed
describe(clean$Time)
quantile(clean$Time)
table(clean$Time,useNA="ifany")

clean$Delete[(clean$Delete=="Hold") & (clean$Time>30)]<-"Time"
table(clean$Delete)

#Identify SDs for straightlining
clean$POSsd<- apply(subset(clean,select=POS1:POS8),1,sd)
clean$OEsd<- apply(subset(clean,select=OE1:OE6),1,sd)
clean$OCBsd<- apply(subset(clean,select=OCB1:OCB4),1,sd)
clean$BLsd<- apply(subset(clean,select=BL1:BL8),1,sd)
Appendix F – Clean Data Syntax (Continued)

table(clean$Straight, useNA="ifany")
clean$Delete[(clean$POSsd==0 & clean$POS1!=4)|(clean$OEsd==0 &
   clean$OE1!=3)|(clean$BLsd==0 & clean$BL1!=4)]<-"Straight"
table(clean$Delete)

CleanDS<-subset(clean, Delete=="Hold")
nrow(CleanDS)

#Recode reverse worded items
CleanDS$POS3 <- car::recode(CleanDS$POS3, "1=7; 2=6; 3=5; 4=4; 5=3; 6=2; 7=1")
CleanDS$POS8 <- car::recode(CleanDS$POS8, "1=7; 2=6; 3=5; 5=3; 6=2; 7=1")
CleanDS$OE3 <- car::recode(CleanDS$OE3, "1=5; 2=4; 4=2; 5=1")
CleanDS$BL2 <- car::recode(CleanDS$BL2, "1=7; 2=6; 3=5; 5=3; 6=2; 7=1")
CleanDS$BL4 <- car::recode(CleanDS$BL4, "1=7; 2=6; 3=5; 5=3; 6=2; 7=1")
CleanDS$BL6 <- car::recode(CleanDS$BL6, "1=7; 2=6; 3=5; 5=3; 6=2; 7=1")
CleanDS$BL8 <- car::recode(CleanDS$BL8, "1=7; 2=6; 3=5; 5=3; 6=2; 7=1")

write.csv(CleanDS, "CleanDS.csv", row.names=FALSE)
names(CleanDS)

##Get descriptive statistics
describe(subset(CleanDS, select=c(PJ1:PJ3,DJ1:DJ3,GR1:GR3,PE1:PE3,POS1:POS8,
   OE1:OE6,OCB1:OCB4,BL1:BL8)))
write.csv(CleanDS, "Descriptives.csv", row.names=FALSE)

##Create scales scores
CleanDS$PJ<-apply(subset(CleanDS, select=c(PJ1,PJ2,PJ3)),1,mean)
CleanDS$DJ<-apply(subset(CleanDS, select=c(DJ1,DJ2,DJ3)),1,mean)
CleanDS$GR<-apply(subset(CleanDS, select=c(GR1,GR2,GR3)),1,mean)
CleanDS$PE<-apply(subset(CleanDS, select=c(PE1,PE2,PE3)),1,mean)

CleanDS$POS<-apply(subset(CleanDS, select=c(POS1,POS2,POS3,POS4,POS5,POS6,POS7,POS8)),1,mean)
CleanDS$OE<-apply(subset(CleanDS, select=c(OE1,OE2,OE3,OE4,OE5,OE6)),1,mean)
CleanDS$OCB<-apply(subset(CleanDS, select=c(OCB1,OCB2,OCB3,OCB4)),1,mean)

table(CleanDS$Level)
table(CleanDS$Setting)
table(CleanDS$Salary)
table(CleanDS$Ethnicity)
table(CleanDS$Gender)
table(CleanDS$Credential)
# Percentage distribution of the demographics

```r
table(CleanDS$State)  
table(CleanDS$Generation)

# Percentage distribution of the demographics

table(CleanDS$Level)  
table(CleanDS$Level)/nrow(CleanDS)  
table(CleanDS$Setting)  
table(CleanDS$Setting)/nrow(CleanDS)  
table(CleanDS$Salary)  
table(CleanDS$Salary)/nrow(CleanDS)  
table(CleanDS$Ethnicity)  
table(CleanDS$Ethnicity)/nrow(CleanDS)  
table(CleanDS$Gender)  
table(CleanDS$Gender)/nrow(CleanDS)  
table(CleanDS$Credential)  
table(CleanDS$Credential)/nrow(CleanDS)  
table(CleanDS$State)  
table(CleanDS$State)/nrow(CleanDS)  
table(CleanDS$Generation)  
table(CleanDS$Generation)/nrow(CleanDS)
```

```r
## Examine correlation matrix

```r
names(CleanDS)
scales <- subset(CleanDS, select=c("PJ","DJ","GR","PE","POS","OE","OCB"))
corm <- cor(scales)
dstat <- describe(scales)
dstab <- rbind(corm, M = dstat$mean)
dstab <- rbind(dstab, SD = dstat$sd)
dstab <- rbind(dstab, n = dstat$n)
alpha(scales)
write.csv(dstab, "Correlations.csv")
```