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PSYCHOLOGICAL CONDITIONS OF ENGAGEMENT AMONG COMMUNITY
COLLEGE MAINTENANCE EMPLOYEES: A CROSS-SECTIONAL STUDY

by

Tammy Terral Franks

A Dissertation
Submitted to the Graduate School,
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and the Department of Educational Research and Administration
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August 2017

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COLLEGE MAINTENANCE EMPLOYEES: A CROSS-SECTIONAL STUDY

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ABSTRACT

PSYCHOLOGICAL CONDITIONS OF ENGAGEMENT AMONG COMMUNITY COLLEGE MAINTENANCE EMPLOYEES: A CROSS-SECTIONAL STUDY

by Tammy Terral Franks

August 2017

This dissertation examined the relationship between employee engagement and the factors that may influence the three psychological conditions of engagement: meaningfulness, safety, and availability for the sector of employees classified as maintenance, grounds, and custodial employees in a community college setting. The factors for each of the three conditions are meaningfulness (job enrichment, work role fit, and co-worker relations), safety (co-worker relations, supervisor relations and co-worker norms), and availability (resources, self-consciousness, and outside activities). Further, the researcher used a mediation model to determine if any of the psychological conditions mediated the relationship between its determinants and engagement. All 15 Mississippi community colleges participated in the study. The researcher administered the quantitative study on site at each of the community colleges. The survey used for this study was developed by May et al. (2004) and derived from Kahn's (1990) qualitative research related to engagement and the psychological conditions that may influence engagement. A total of 452 participants completed the survey.

Research contends that campus appearance is a factor in a student's decision to enroll or remain enrolled in college (Absher & Crawford, 1996; Campbell & Bigger; Noel-Levitz, 2011; Smith, 2005). Likewise, research suggests that a relationship exists between employee engagement and an employee's positive work performance, increased

efficiency, and lower turnover rates. Engagement may also result in financial and organizational success (Bates, 2004; Baumruk, 2004; Buhler, 2006; Harter, Schmidt, & Hayes, 2002). Because maintenance, grounds, and custodial employees are responsible for the appearance of the campus, and community colleges are continuously seeking ways to both recruit and retain students, an examination of the factors that influence employee engagement of this sector of employees was warranted.

The findings of this research study indicate that meaningfulness and availability were positively related to engagement. Job enrichment and work role fit were significantly related to meaningfulness. Resources was significantly related to availability. Although safety was not related to engagement, all three factors, co-worker relations, supervisor relations and co-worker norms were related to safety. Lastly, only two fully mediated relationships were found. Meaningfulness mediated the relationship between job engagement as well as work role fit and engagement.

Because no other studies could be found that focus on this sector of employees and the psychological conditions of engagement, this study may serve as a starting point to inform community college administrators of the importance of engagement when hiring, training, and retaining maintenance, grounds, and custodial employees. Future research should consider replicating this study in a university setting to determine if the results generalize to this sector of employees in the university system.

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DEDICATION

I would like to dedicate my dissertation to my family. First of all, I would like to thank my Mom and Dad who made education a priority and ensured that all of their children completed college. I would also like to thank my husband, Michael, for being patient with me and understanding the demands of my time. To my son, Jake, who has grown into a wonderful young man during my journey to a Ph.D., thank you for always encouraging me, hanging out with me as I researched and wrote, and for tolerating my busy schedule. Lastly, thanks to my sisters, Tonya and Tasha, for letting me off the hook many times while I dedicated my time to completing my dissertation. I am truly blessed with a wonderful family.

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CHAPTER I - INTRODUCTION

The concept of engagement in the workplace began to emerge in the early 1990s when the Gallup Organization, a performance management consulting company, designed a survey to measure employee engagement (Harter, Schmidt, & Killham, 2003). Around the same time, William Kahn (1990) published a scholarly paper in the *Academy of Management Journal*, which described the results of two theory-generating studies that he conducted related to engagement at work. Despite the introduction of engagement research from both business and academia, the concept of engagement did not fully emerge in the workplace for another decade.

Around the year 2000, the work environment within organizations transitioned from a traditional model to a modern model such that typically stable organizational environments began to experience continuous change, requiring significant involvement and adaptation on the part of employees (Schaufeli, 2013). This shift led to organizations requiring more than the once traditional expectation of an investment of physical resources from employees. As such, the willingness of employees to invest their psychological capabilities (emotional, cognitive, and physical selves) in order to meet the demands of organizations is expected (Schaufeli, 2013).

As organizations and consulting firms were recognizing the value of employee engagement at the turn of the century, researchers began focusing on engagement through the lens of the positive psychology movement, the scientific study of human potential, strength, happiness, and optimal functioning (Schaufeli, 2013; Seligman & Csikszentmihalyi, 2000; Simons & Buitendach, 2013). A large amount of research spanning many dimensions of engagement has been published (Chikoko, Buitendach &

Kanengoni, 2014; Olivier & Rothmann, 2007; Rich, Lepine, & Crawford, 2010; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). In fact, in the past 14 years, over 2,000 peer-reviewed articles have been published with either employee engagement or work engagement within the title. For instance, scholarly literature related to engagement includes a focus on the importance of engagement (Macey & Schneider, 2008), antecedents of engagement (Saks, 2006), outcomes of engagement (Christian, Garza, & Slaughter, 2011; Salanova, Agut, & Peiro, 2005), the measurement of engagement (Shuck, 2011), and how engagement differs from other constructs (Hallberg & Schaufeli, 2006).

Research supports the idea that engaged employees are more likely to experience feelings of fulfillment, personally identify with the job, exhibit a positive state of mind, show loyalty and attachment to the organization, and are less likely to quit the organization (Roberts & Davenport, 2002; Schaufeli & Bakker, 2004; Sonnentag, 2003). In addition, engagement has been related to positive work experience for employees and work outcomes for organizations (Schaufeli & Bakker, 2004; Sonnentag, 2003). For this reason, the concept of employee engagement continues to attract the attention of employers looking to increase productivity and positively influence their organizations. Nevertheless, in order for employees to be engaged, an understanding of why an employee chooses to engage is paramount.

Kahn (1990) describes engagement as “the harnessing of organization’s members’ selves to their work roles [by which they] employ and express themselves physically, cognitively, and emotionally during role performances” (p. 694) and contends that certain psychological conditions must be met in order for individuals to choose to engage in task

behaviors. According to Kahn (1990), the presence of three psychological conditions, meaningfulness, safety, and availability may influence an employee to engage in a work role. Specifically, an employee will determine whether to engage after subconsciously considering, “(1) How meaningful is it for me to bring myself into this performance? (2) How safe is it to do so? and (3) How available am I to do so?” (p. 703).

Employee engagement has been studied within a variety of employee sectors, encompassing employees working in business-related fields as well as those employed by educational institutions. Within the educational arena, employee engagement research has focused primarily on employees working in positions considered white-collar jobs, typically found in the administrative, academics, and student services areas and is most often situated in a university setting (Boone, 2012; Friedrich, 2011; Hermsen & Rosser, 2008; Krupa, 2011). However, studies focusing on the psychological conditions of engagement, the conditions that Kahn (1990) suggested may influence an employee to engage, are limited. An extensive search revealed only one engagement study focusing specifically on higher education employees and the aforementioned psychological conditions. (Chikoko, Buitendach & Kanengoni, 2014). The most significant finding of the study suggests a relationship between meaningfulness and engagement. Similar to other engagement studies in higher education, the participants in Chikoko et al’s (2014) study primarily consisted of administrative personnel.

The majority of engagement studies within a higher education setting are situated within a university setting. For instance, one study examined the relationship between employee engagement and the demographic and profile characteristics of staff members (Hermsen & Rosser, 2008) whereas another study focused on the relationship between

engagement and leadership practices of faculty and staff administrators (Krupa, 2011). A different study focused on engineering faculty employed at ten universities and their level of engagement as it relates to cooperative education participation (Friedrich, 2011).

The few studies related to community colleges and employee engagement are primarily geared towards faculty. For example, a study conducted at Cuyahoga Community College provided an analysis of perceptions and conditions that affected full-time faculty member engagement at the college (Foley, 2012). A different study sought to understand the lack of employee engagement in community college adjunct faculty members (Jolley, Cross, & Bryant, 2014). Similarly, Hornsby (2009) provided insight on engaging faculty who are located at branch campuses of two Louisiana community and technical colleges.

Although engagement studies exist within the higher education setting, the participants involved are typically faculty, staff, and administrators (Chikoko, et al., 2014; Friedrich, 2011; Hermsen & Rosser, 2008; Krupa, 2011). The sector of employees responsible for maintaining the campus facilities and grounds have received little attention. Classified as blue-collar workers, college maintenance employees perform manual labor duties and may be skilled (electricians, plumbers) or unskilled (custodians, groundskeepers) laborers (National Compensation Survey, 2009).

In a study of various professions, Schaufeli, Bakker and Salanova (2006) found that blue-collar workers are consistently less engaged than employees in occupations such as managers, educators, and police officers. Nevertheless, studies indicate that the quality of work performed by college maintenance employees related to the appearance of the campus is important to both recruiting students and retaining them (Absher &

Crawford, 1996; Campbell & Bigger, 2008; June, 2006; Smith, 2005). For example, a 2005 study suggested that the cleanliness of facilities is important to students (June, 2006). Likewise, a 2011 Noel-Lewitz report found that over half of the students surveyed indicated that campus appearance was a factor in their decision to enroll at a community college.

Because community colleges rely on student enrollment for funding (Mississippi Community College Board, 2014), and research suggests a lack of engagement by the employees who maintain the appearance of the campus (Schaufeli, Bakker & Salanova, 2006), the psychological conditions of meaningfulness, safety, and availability as posited by Kahn (1990) to influence whether an employee decides to engage in the workplace should be examined in relation to this sector of employees.

Purpose of the Study

This study sought to examine the relationship between employee engagement and the factors that may influence the three psychological conditions of engagement — meaningfulness, safety, and availability; for the sector of employees classified as maintenance, grounds, and custodial employees in Mississippi's 15 community colleges.

Statement of the Problem

Research has shown that employee engagement may be related to employee's positive work performance, lower turnover rates, increased efficiency, and may result in financial and organization success (Bates, 2004; Baumruk, 2004; Buhler, 2006; Harter, Schmidt, & Hayes, 2002). Likewise, studies have shown that a relationship may exist between the overall appearance of a community college campus and a student's decision to enroll and/or remain enrolled at a campus (Absher & Crawford, 1996; Campbell &

Bigger, 2008; Noel-Lewitz, 2011; Smith, 2005). Although some studies exist related to employee engagement and administrators, faculty, and staff of community colleges, no studies can be found in the literature linking employee engagement and campus maintenance personnel, who are directly responsible for ensuring campuses are properly maintained and aesthetically pleasing. Thus, an examination of the factors that influence employee engagement of community college maintenance employees was warranted.

Hypotheses and Research Questions

Kahn (1990) contends that three psychological conditions may influence employee engagement through the psychological experiences in the work role: meaningfulness, safety, and availability. Further, research by Kahn (1990) and May et al. (2004), suggests that meaningfulness may be influenced by the factors of job enrichment, work role fit, and co-worker relations. The factors that may influence safety are supportive supervisor relations, rewarding co-worker relations, and adherence to co-worker norms. Lastly, the factors that may influence availability include resources, self-consciousness, and outside activities.

Prior studies related to the psychological conditions theorized by Kahn (1990) to influence an employee to engage in a work role have focused primarily on educators or employees in business and industry (Chikoko, et al., 2014; May et al., 2004; Olivier & Rothmann, 2007). Therefore, this study explored whether the relations found in previous studies generalize to blue-collar workers, specifically, community college maintenance employees.

Specific research hypotheses include:

RH₁: Job enrichment, work role fit, and/or co-worker relations will be related to psychological meaningfulness.

- a. Job enrichment will be positively related to psychological meaningfulness.
- b. Work role fit will be positively related to psychological meaningfulness.
- c. Co-worker relations will be positively related to psychological meaningfulness.

RH₂: Supportive supervisor relations, rewarding co-worker relations, and/or adherence to co-worker norms will be related to psychological safety.

- a. Supportive supervisor relations will be positively related to psychological safety.
- b. Rewarding co-worker relations will be positively related to psychological safety.
- c. Adherence to co-worker norms will be negatively related to psychological safety.

RH₃: Resources, self-consciousness, and/or outside activities will be related to psychological availability.

- a. Resources will be positively related to psychological availability at work.
- b. Self-consciousness will be negatively related to psychological availability at work.
- c. Outside activities will be negatively related to psychological availability at work.

- RH₄: Psychological meaningfulness, psychological safety, and/or psychological availability will be related to engagement at work.
- a. Psychological meaningfulness will be positively related to engagement at work.
 - b. Psychological safety will be positively related to engagement at work.
 - c. Psychological availability will be positively related to engagement at work.
- RH₅: Psychological meaningfulness mediates the relationship between its determinants (i.e. job enrichment, work role fit, and co-worker relations) and work engagement.
- RH₆: Psychological safety mediates the relationship between its determinants (i.e. co-worker relations, supervisor relations, and co-worker norms) and work engagement.
- RH₇: Psychological availability will mediate the relationship between its determinants (i.e. resources, self-consciousness, and outside activities) and engagement at work.

Justification

Literature exists that addresses employee engagement for professionals, educators, and even blue-collar employees in business and industry. However, research related to employee engagement for non-professional hourly employees in a college setting is limited. Studies suggest that the work performed by this sector of employees may influence enrollment. Likewise, community college administrators are looking for ways to maintain a competitive advantage in this challenging economic environment. Therefore, research is needed to examine the relationship between employee engagement

and the factors that influence the three psychological conditions of engagement for this sector of employees: meaningfulness, safety, and availability.

This study was situated in the Mississippi community college system for a variety of reasons. First, Mississippi community colleges are unique in that all 15 Mississippi community colleges offer amenities similar to universities such as student residential halls and athletics (Mississippi Community College Board, 2015). In fact, of the 1,167 community colleges, nation-wide, only 269 colleges provide dormitories for students. Among Mississippi's neighboring states: Louisiana, Tennessee, Arkansas, and Alabama, only 19 community colleges offer student dorms (National Center for Education Statistics, 2015). Because students have access to residential facilities 24 hours a day, 7 days a week, maintenance personnel are expected to be available to handle emergencies both day and night.

Second, state funding for Mississippi community colleges is considerably less than for Mississippi's public universities. In 2007, a law passed requiring mid-level funding for Mississippi community colleges such that per-student funding for community colleges is calculated midway between the funding allocated for K-12 and Mississippi universities. Thus far, the state has failed to meet the mid-level funding law and the community colleges continue to receive significantly less funding than Mississippi universities (MACJC Legislative Workshop, 2015). The deficiency in mid-level funding for community colleges impacts both employee salaries as well as budgets necessary to sufficiently maintain the campus.

Lastly, Mississippi community colleges are relying more heavily on student tuition and fees than in years past. From FY 2000 to FY 2014, the state funding for

Mississippi community colleges declined from 55.8% to 40.9% of total revenues. At the same time, the percentage of student fees increased from 17.8% to 32.2% of total revenues (Mississippi Community College Board, 2014). Likewise, the average cost of student tuition and fees at the 15 Mississippi community colleges has more than doubled since FY 2000 (S. Ford, personal communication, July 31, 2013). Students are paying more to attend college than ever before. Likewise, they have a variety of choices; university, community colleges, or propriety schools. For this reason, Mississippi community colleges should focus on ways to maintain a competitive advantage.

The potential benefits of this study are far reaching. For community college administrators, an understanding that engaged maintenance employees may have an influence on student enrollment is paramount. A plethora of literature can be found on the importance of college faculty, staff, administration, and student support services; however, very little research exists that focuses on college maintenance personnel (Boone, 2012; Friedrich, 2011; Hermsen & Rosser, 2008; Krupa, 2011). Nevertheless, studies suggest a link between the quality of work performed by college maintenance personnel and a student's decision to enroll (Absher & Crawford, 1996; Noel-Levitz, 2011; Smith, 2005).

Having an engaged workforce is important for a variety of reasons. For example, college maintenance personnel are often tasked with accomplishing more work with the same or a fewer number of employees due to budget constraints. Specifically, one study indicated that the building square footage a custodian is expected to maintain increased by 20% in just one year (Agron, 2010). Another challenge for college maintenance departments is the influence of employee absenteeism on work productivity. However,

research indicates that engaged employees miss few workdays because they recognize the importance of their roles at work and care about the success of the organization (Gonring, 2008; Harter, Schmidt, & Hayes, 2002; Nahrgang, Morgeson, & Hofmann, 2011).

Similarly, employee turnover has residual effects on productivity and possibly on the level of engagement of other employees within a department. When an employee resigns, the organization may experience a loss of productivity due to the time it takes to recruit and to train the new employee to perform the assigned job responsibilities. Further, during the transition of hiring a replacement, other employees may be required to cover some of the job tasks, which may overextend an employee's ability to successfully complete regularly assigned work responsibilities. Even in organizations that appear productive, the continuance of absenteeism and turnover may create a strain on the job performance of the remaining employees. For this reason, proactively focusing on employee engagement may support the bottom line and potentially reduce the domino effect related to loss of productivity, cost of employee turnover, and the training of new employees (Boushey & Glynn, 2012).

Theoretical Framework

This study was situated in the work of Kahn (1990). According to Kahn (1990), certain psychological conditions must be met before an employee fully engages cognitively, emotionally, or physically within a work role performance. Kahn (1990) suggested that within the context of work, an employee chooses to engage or disengage after intuitively considering the following questions:

1. How meaningful is it for me to bring myself into this performance?
2. How safe is it to do so?

3. How available am I to do so? (p. 703)

Meaningfulness is defined by Kahn (1990) as a “feeling that one is receiving a return on investments of one’s self in a currency of physical, cognitive, or emotional energy” (p. 704) and has been linked with internal work motivation in the area of job design research (Fried & Ferris, 1987; Hackman & Oldham, 1980; Renn & Vandenberg, 1995). Likewise, research suggests that positive outcomes such as high performance, motivation, and satisfaction may result in low absenteeism, and turnover may diminish when an individual experiences the psychological state of meaningfulness (Hackman & Oldham, 1976; Rentsch & Steel, 1998; Schmidt & Daume, 1993).

The second psychological condition (safety) involves a feeling of assurance and security when one expresses his or her thoughts, feelings, and ideas without fear of retribution (Kahn, 1990). Through his research, Kahn (1990) identified four factors that influenced one’s sense of safety: management style and process, interpersonal relationships, organizational norms, and group/intergroup dynamics. These factors include the feelings of reciprocal trust and support with one’s supervisor and co-workers. Additionally, the degree to which one feels it is safe to engage is determined by how consistent, predictable, and nonthreatening a situation appears to the individual. When an individual experiences unpredictable and inconsistent behaviors from his or her supervisor, co-worker, or within a group setting, trust is eroded and the inclination to be engaged is diminished (Kahn, 1990).

The third psychological condition is availability. Kahn (1990) defined availability as the “sense of having the physical, emotional, or psychological resources to personally engage at a particular moment” (p. 714). Kahn (1990) found four factors that may

influence availability: physical energies, emotional energies, insecurity, and outside life. Physical and emotional energies refer to the amount of resources, whether physical or emotional, that an individual has to offer in a given situation. Availability may be influenced by one's self-efficacy. Lastly, whether an individual is psychologically available may be affected by distractions in one's outside life and personal responsibilities.

Even though expansive research based on Kahn's theory of engagement has been conducted (Ashforth & Humphrey, 1995; May et al., 2004; Rich, LePine, & Crawford, 2010; Rothbard, 2001; Saks, 2006; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002), few studies have focused specifically on the three psychological conditions of engagement posited by Kahn (1990) to explore whether an employee will engage or disengage from a work role. The existing research offers distinctions between the concept of engagement and the constructs of organizational commitment, job satisfaction, and job involvement (Macey & Schneider, 2008; Salanova, Agut, & Peiro, 2005). Further, employee engagement definitions have linked the concept of engagement to the outcomes of work performance (Federman, 2009; Kahn, 1990).

Kahn's (1990) engagement model was operationalized by May, Gilson, and Harter (2004) in a field-study involving employees in an administrative division of an insurance company located in the Midwest section of the United States. In the study, May et al. (2004) examined the factors suggested by Kahn (1990) that may influence the three psychological conditions of meaningfulness, safety, and availability. The factors include co-worker relations, supervisor relations, job enrichment, resources, work role fit, co-worker norm adherence, self-consciousness, and outside activities. Further, May et al.

(2004) examined the relationship of each psychological condition and its relationship to work engagement as well as whether each psychological condition mediates the relation between its determinants and work engagement. In a subsequent study, Olivier and Rothmann (2007) built on the findings of May et al. (2004) by testing Kahn's proposed model with employees of a multinational oil company located in South Africa. Among the three psychological conditions, both May et al. (2004) and Olivier and Rothmann (2007) found meaningfulness to be the strongest predictor of engagement.

Delimitations

The following delimitations represent steps that the researcher took to voluntarily limit the scope of the study:

The study was delimited to employees of the 15 community colleges in Mississippi due to the distinctiveness of the Mississippi community college system in relation to Mississippi Universities as well as community colleges outside of Mississippi.

The study was delimited to Mississippi Community college employees working with the maintenance and grounds departments of the 15 community colleges.

The study was delimited to employees who work directly for one of the 15 community colleges in Mississippi. Thus, employees working at a college but who are employed by a sub-contractor will not be asked to participate.

Assumptions

The researcher assumed that all participants would respond accurately, truthfully, and in an unbiased fashion in response to each questionnaire item.

Definition of Terms

For the purpose of this study, the subsequent words and phrases were defined as follows:

Blue-collar worker - An employee who typically performs manual labor and receives hourly wages. Blue-collar workers may be skilled (electricians, plumbers) or unskilled (custodians, groundskeeper) laborers (National Compensation Survey, 2009).

Community college - “Any institution regionally accredited to award the associate in arts or the associate in science as the highest degree” (Cohen & Brawer, 2008, p. 5).

Co-worker norms – Informal rules, which tend to govern behavior and attitudes towards the work, within a group of employees. In relation to work engagement, employees who stay within the boundaries of the informal rules are more likely to experience psychological safety (May et al., 2004).

Co-worker relations – As it relates to psychological meaningfulness, relationships which provide a sense of belonging, social identity, and mutual respect (May et al., 2004).

Job enrichment – The use of task significance, skill variety, task identity, autonomy, and feedback to provide meaningfulness work experience (Hackman & Oldham, 1980; Kahn, 1990).

Psychological availability - a psychological state in which one possesses the physical, emotional and psychological strength to carry out given tasks (Kahn, 1990).

Psychological meaningfulness – “A feeling that one is receiving a return on investments of one’s self in a currency of physical, cognitive, or emotional energy. People [experience] meaningfulness when they [feel] worthwhile, useful, and valuable as though they [make] a difference and [are] not taken for granted” (Kahn, 1990, p. 704).

Psychological safety - The feeling of assurance and security when one expresses his or her thoughts, feelings, and ideas without fear of retribution (Kahn, 1990).

Outside activities – Activities in an individual’s personal life that occur outside of work and may draw energies away from work.

Resources – The abilities an employee brings to the work role in order to complete a task: physically, emotionally, and cognitively (Kahn, 1990; May et al., 2004).

Rewarding co-worker relations – As it relates to psychological safety, co-workers exhibit mutual trust, respect, and concern for one another (Kahn, 1990; May et al., 2004).

Self-consciousness – An employee’s attention to external rather than internal signals which may cause the employee to feel judged by peers and lead to a distraction from job duties (Goffman, 1959; Kahn, 1990).

Supportive supervisor relations – Behaviors by a supervisor that are perceived by an employee as being trustworthy and foster psychological safety within the work environment (May et al., 2004).

Work role fit – As it relates to psychological meaningfulness, an employee will typically gravitate towards a work role that permits the employee to express his or her self-perspective (May et al., 2004).

CHAPTER II – REVIEW OF THE LITERATURE

Introduction

The purpose of this study was to examine factors that may influence employee engagement in maintenance employees, the sector of employees classified as blue-collar workers, in a community college setting. This chapter offers an overview of the literature relevant to employee engagement. Specifically, measures of employee engagement were examined. Likewise, because the concept of employee engagement is unique, an analysis of concepts which are similar yet different from employee engagement are discussed. The theoretical framework for this study was situated in an ethnographic study conducted by Kahn (1990) in which he sought to explore the fundamental reasons that people invest varying amounts of themselves in the performance of a work role.

Employee Engagement Theory

Conceptually, Kahn (1990) began by examining the work of sociologist Erving Goffman (1959) related to role theory, or more specifically, role performance. Goffman used the analogy of actors on a stage to illustrate the concept of role performance. Goffman (1961) proposed that the attachment to and detachment from one's role varies and suggested that an individual's behavior is indicative of whether one is experiencing role embracement or role distance at that moment. Goffman (1961) contends that role distance can be identified by one's expressive features such as gestures or behaviors (yawning, showing boredom, or exhibiting sarcasm) and indicates that although the person is performing the role task, the person is not willing to fully engage in the role. In contrast, role embracement suggests that one is truly immersed in a role performance, which is expressed through actions and behaviors. Goffman (1961) used the example of a

traffic policeman's embracement of his role by actively blowing his whistle and the moving of arms while working at an intersection during rush hour traffic. Although Goffman (1961) provided a theoretical foundation through his research on role attachment and detachment, his focus was on brief face-to-face experiences. Kahn (1990) argued that a different concept was required in order to encompass the ongoing dynamics of organizational life, considered to be both psychologically complex and emotionally stimulating (Diamond & Allcorn, 1985).

Kahn (1990) explored the works of a psychologist (Freud, 1922), sociologists (Goffman 1961; Merton 1957), and group theorists (Slater, 1966; Smith & Berg, 1987). He found consistency in the belief that individuals are inherently hesitant when considering whether to be associated with an ongoing group and/or social system such that an individual will move towards and pull away from his or her membership in the group or social system in an effort to guard against being both isolated and engulfed by the membership (Kahn, 1990). Consequently, Kahn (1990) coined the terms "personal engagement and personal disengagement," which refers to "the behaviors by which people bring in or leave out their personal selves during work role performances" (p. 694). Drawing from Alderfer (1972) and Maslow's (1954) research related to theories of motivation, Kahn (1990) postulated that the concepts of personal engagement and personal disengagement, "integrate the idea that people need both self-expression and self-employment in their work lives as a matter of course" (p. 694). Borrowing from Goffman's (1961) definition of role embracement, Kahn (1990) defined personal engagement as the "harnessing of organization members' selves to their work roles; in

engagement, people employ and express themselves physically, cognitively, and emotionally during role performances” (p. 694).

In his qualitative study, Kahn (1990) conducted interviews with two distinct groups of employees: camp counselors and employees of an architectural firm. His aim was to analyze the situations at work where individuals were either engaged or disengaged. The focal point of Kahn’s (1990) research was the emergence of three psychological conditions: meaningfulness, safety, and availability along with the assertion that, collectively, the three conditions shaped how people occupied their roles. Further, Kahn (1990) suggested that within the context of work, an employee chooses to engage or disengage after intuitively asking himself or herself the following questions:

1. How meaningful is it for me to bring myself into this performance?
2. How safe is it to do so?
3. How available am I to do so? (p. 703)

Lastly, Kahn (1990) contends that the constructs of meaningfulness, safety, and availability are central to explaining why an employee chooses to engage at work.

Measuring Employee Engagement

Subsequent to Kahn’s (1990) groundbreaking research, several academic researchers contributed to the body of knowledge related to engagement. In 1997, Maslach and Leiter introduced a line of research, which conceptualized engagement as the opposite of burnout whereas burnout is viewed as a loss of engagement. Burnout is considered a psychological syndrome with characteristics of cynicism (low involvement), inefficacy (low efficacy), and exhaustion (low energy) and results from continuing occupation stressors (Leiter & Maslach, 2004). The Maslach Burnout Inventory (MBI)

instrument was developed to measure engagement as it relates to burnout (Maslach, Jackson & Leiter, 1996). Specifically, the MBI measures exhaustion, cynicism, and efficacy and suggests an individual is experiencing engagement when one's efficacy score is high and exhaustion and cynicism scores are low (Leiter & Maslach, 2004).

A second conceptualization of the burnout/engagement relationship soon followed. Schaufeli, Salanova, González-Romá, and Bakker (2002) contended that burnout and engagement are closely related yet are distinct from one another and defined work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (p. 74). According to the researchers, engagement is a multifaceted construct that is comprised of three dimensions: vigor, dedication, and absorption. Schaufeli et al. (2002) proposed a new instrument, the Utrecht Work Engagement Scale (UWES), which assesses vigor, dedication, and absorption to measure engagement. Schaufeli et al. (2002) described vigor as a state in which an employee experiences high energy levels, mental resilience, and persistence during difficulties and is willing to devote energy while on the job. Dedication is characterized by an employee's solid contribution to work, significance, enthusiasm, and sense of satisfaction. Absorption is seen as an immersion into one's work whereas time quickly passes and one struggles to separate from the work.

According to the academic literature, the UWES is the most frequently used instrument to measure engagement (Christian & Slaughter, 2007). Nevertheless, Shirom (2003) has criticized Schaufeli et al.'s (2002) conceptualized definition of engagement asserting that the researchers failed to develop the dimensions of engagement: vigor, dedication, and absorption from a theoretical perspective. Further, Shirom (2003) argues

that the three constructs (vigor, dedication, and absorption) overlap substantially with other psychological concepts. For example, vigor is comprised of both motivational elements (willingness to devote energy) and resilience (perseverance during difficult situations). Dedication is similar to defined constructs of job involvement (Brown & Leigh, 1996), and absorption overlaps with Kahn's (1992) theoretically derived concept of psychological presence at work that includes being connected, attentive, and focused.

A third line of engagement research was introduced by Harter, Schmidt, and Hayes (2002) in a study that used a positive psychology framework to examine employee engagement and employee satisfaction at the business unit/department level. The researchers used data from nearly 8,000 business units in over 30 companies obtained by the Gallup Organization to conduct a meta-analysis that suggested a relationship between higher levels of engagement and business outcomes (profits). Although the work of Harter et al. (2002) appears frequently in employee engagement literature, support from academia is limited due to the researchers' use of the Gallup Work Audit (GWA), a proprietary questionnaire used to measure engagement. The GWA presents questions related to organizational outcomes such as employee retention, productivity, customer service and profitability at the business/department unit level (Little & Little, 2006). Despite popularity among practitioners, the survey lacks theoretical grounding. The primary distinction among the three concepts of engagement previously discussed refers to the context in which work engagement is defined and examined. For example, Kahn (1990) studied the work role of employees. Kahn (1990) asserts that an employee will subconsciously consider the three psychological conditions of engagement, meaningfulness, safety, and availability when occupying his or her work role.

In contrast, the burnout/engagement literature proposed by both Leiter and Maslach (2004) and Schaufeli et al. (2002) focuses on the work itself. Specifically, an employee's work activity is examined for signs of low efficacy, exhaustion, (Leiter & Maslach, 2004) high energy levels, and mental resilience (Schaufeli et al., 2002). Lastly, Harter et al. (2002) refers to engagement as it relates to the organizational outcomes for an entire department rather than focusing on an employee's work role or work activity. Likewise, Harter et al. (2002) relies on the GWA, a survey that was derived empirically and lacks a theoretical foundation (Little & Little, 2006).

Employee Engagement vs. Other Concepts

Although engagement has been analyzed and defined by a number of researchers with various points of view, a common denominator among researchers is that engagement can be differentiated from other concepts. Csikszentmihalyi (1997), for instance, suggests that the concept of flow entails total immersion of one's cognitive self in a specific activity or event that provides a short-term and heightened or peak experience. In contrast, Kahn (1990) contends that the concept of engagement is more stable and consistent over time. Further, Kahn (1990) suggests that during engagement, employees invest varying degrees of themselves, physically, emotionally, and cognitively.

Rich et al. (2010) suggests that the concept of job satisfaction only involves an employee's affective (i.e. emotional) attitude towards his or her job. A study by Yalabik, Popaitoon, Chowne, and Rayton, (2013) asserts that job satisfaction is an antecedent of engagement. Macey and Schneider (2008) suggest that the constructs of engagement and satisfaction differ such that engagement involves dedication, passion, and a sense of

energy whereas satisfaction refers to being adequate, sufficient, or of an acceptable level. Likewise, Warr and Inceoglu (2012) contend, “engagement may be viewed as energized satisfaction; engaged workers are not necessarily satisfied in some respects, but satisfied workers may or may not be engaged” (p.130).

A study by Hallberg and Schaufeli (2006) suggests that the concepts of job involvement, organizational commitment, and engagement refer to one’s positive attachment to work; however, the features of work attachment differentiate among the concepts. Accordingly, Hallberg and Schaufeli (2006) suggest that job involvement, organizational commitment, and engagement should be treated as distinct yet related constructs. Kanungo (1982) describes job involvement as “a function of how much the job can satisfy one’s present needs” (p. 32). Similarly, May et al. (2004), suggest that “engagement may be thought of as an antecedent to job involvement in that individuals who experience deep engagement in their roles should come to identify with their jobs” (p. 12).

Organizational commitment is considered a psychological state and refers to an employee’s general attitude, involvement, and identification with the organization as a whole (Porter, Steers, Mowday, & Boulian, 1974). The three distinct areas of organizational commitment are normative commitment, affective commitment, and continuance commitment. Normative commitment relates to an employee’s feelings of responsibility to continue employment with the organization and assumes the employee feels obliged to stay with the organization. Affective commitment relates to the emotional attachment that an employee may have to the organization and assumes that the employee wants to remain with the organization. Lastly, continuance commitment refers to an

employee's assessment of the associated costs, the advantage of leaving the organization, and relies on whether the employee needs to continue with the organization (Allen & Meyer, 1990).

Organizational commitment is essentially an employee's commitment to the organization (employer) and focuses on the organization (Maslach, Schaufeli, & Leiter, 2001). In contrast, engagement focuses on the employee's relationship with his/her work role along with the employee's ability to physically, emotionally, and cognitively employ and express himself or herself during role performance (Kahn, 1990; May et al., 2004). A 2013 study assessed discriminate validity of employee engagement and organizational commitment using confirmatory factor analysis to ensure distinct factors. As such, the study concluded that the constructs of employee engagement and organizational commitment are distinct (Biswas & Bhatnagar, 2013).

Because engagement, organization commitment, flow, job involvement, and job satisfaction can each be described in terms of a positive psychological state related to work, it should be expected that the concepts are related on some level. Nevertheless, researchers within academia maintain that engagement is a separate construct which consists of cognitive, behavioral, and emotional components. Likewise, research suggests a relationship exists between employee engagement and positive work performance, an increase in employee productivity, a reduction in turnover rates, and the potential for financial and organizational success (Bates, 2004; Baumruk, 2004; Buhler, 2006; Harter, Schmidt, & Hayes, 2002).

Higher Education and Employee Engagement Studies

Literature related to higher education and employee engagement is limited; however, a few studies do exist. The studies primarily concentrate on administrators, staff, or faculty. A study by Hermsen and Rosser (2008) examined the profile characteristics and demographics that may explain job satisfaction and engagement among staff personnel in a university setting. The results of the study indicated that job fit, role fit, working conditions, and time spent interacting with students were positively related to engagement. In contrast, the staff members' length of employment on the campus was negatively related to work engagement. Another study focused on faculty members in the school of engineering from several universities and their engagement levels related to cooperative education (co-op) participation. The findings suggested that the relationship between academic rank, years of teaching, major/discipline, and the level of a faculty member's co-op engagement was not statistically significant. However, the researchers found a positive relationship between a faculty member's level of engagement and the perceived level of environmental support from the department, college, and university as it relates to co-op activities (Friedrich, 2011).

An article, specific to community colleges, focused on the college administration's concern related to low participation and low engagement of faculty members in an academic program. In conjunction with an external consultant, the department's lead administrator utilized the Burke-Litwin Model of Organizational Performance and Change (Burke, 2002) to conduct an assessment of the faculty members and to subsequently develop a proposal for planned change in the academic program. Results indicated that the college administration was successful in determining the cause

for the department's low faculty participation as well as developing a strategy to increase employee engagement among the faculty members in the academic department (Boone, 2012).

In a different study, the researcher grouped faculty members and staff personnel together and classified the group as customer-contact employees (Krupa, 2011.) The qualitative study focused on employee engagement among customer-contact employees as it relates to leadership practices of administrators at a non-profit, private institution. Results indicated that customer-contact employees who worked for encouraging and caring middle managers (deans or assistant deans) expressed heightened levels of engagement. Additionally, the study suggested that the institution's top administrators seemed detached from customer-contact employees. Consequently, the customer-contact employees reported being somewhat engaged with their own jobs but were less than fully engaged or disengaged with the institution as a whole (Krupa, 2011).

All of the aforementioned studies touch on the importance of employee engagement within higher education, but none of them focuses on the importance of employee engagement among blue-collar workers. While studies focusing on community college maintenance employees and engagement may exist, an extensive search of Proquest, Academic Search Premier, ERIC, and Google Scholar did not reveal any literature in this area. Nevertheless, research related to blue-collar workers suggests a need to focus on engagement for this sector of employees. For example, Schaufeli, Bakker, and Salanova (2006) examined engagement across various occupations and concluded that blue-collar workers were consistently less engaged than other occupational groups such as educators, managers, and police officers.

Likewise, research suggests that students consider campus appearance as a factor when choosing a college (Galotti & Mark, 1994). In fact, a study by the Carnegie Foundation (1986) found that 62% of prospective college students reported the appearance of the facilities and grounds had the most influence on them while visiting the campus. A subsequent report by Noel-Levitz (2002) surveyed high school seniors from four states in regards to their college campus visits. As such, the report supports the notion that the cleanliness and the condition of the facilities and grounds are important factors in the recruitment of students. Since the appearance of the campus provides a first impression to visitors and is considered a significant characteristic when recruiting students, an examination of the factors that may influence engagement in the sector of employees responsible for maintaining the college campus should be explored.

The Psychological Conditions of Engagement

In an effort to examine the concept of employee engagement, this study focused on the psychological conditions of meaningfulness, safety, and availability which are suggested by Kahn (1990) to influence engagement through psychological experiences in the work role. Kahn (1990) conducted a qualitative study with the intent of identifying psychological conditions which are “powerful enough to survive the gamut of individual differences” (p. 695) and influence personal engagement and disengagement. The study concluded that the psychological conditions of meaningfulness, safety, and availability affect how an employee occupies his or her work role, resulting in whether the employee will choose to engage or disengage from the work role.

Meaningfulness

Meaningfulness refers to the positive feeling that one's contribution at work is worthwhile, important, and useful (Kahn, 1990, 1992). Pratt and Ashford (2003) contend that meaningfulness occurs when work is "perceived by its practitioners to be, at minimum, purposeful and significant" (pp. 310-311). Similarly, Strümpfer (2003) maintains "meaningfulness is experienced when stimuli are perceived as motivationally relevant, in the form of welcome challenges that are worth engaging with, and investing oneself in" (p. 71). Isaksen (2000) suggests that meaningfulness is not an intrinsic characteristic of a specific type of job; rather, it is a distinct state of mind that occurs when an individual experiences a satisfactory relationship between one's self and the context of one's work. Likewise, Pines (1996) asserts that idealistic or motivated employees "work hard because they expect their work to make their lives matter in the larger scheme of things and give meaning to their existence" (p. 83).

A study conducted by Treadgold (1999) indicates that most employees prefer work that is meaningful. Further, the results of Treadgold's (1999) study found that clarity of self-concept and problem-focused coping is positively correlated to employees engaged in meaningful work. In contrast, the study concluded that stress, depression, and emotion-focused (avoidance) coping is negatively correlated to employees engaged in meaningful work. Through the development of the job characteristics model, Hackman and Oldham (1976) link internal work motivation to meaningfulness and suggest that when a job is designed to offer skill variety, task significance, and task identity, the employee will find meaningfulness. Similarly, when an employee experiences the psychological state of meaningfulness, positive organizational outcomes such as high performance, satisfaction, and motivation may occur, contributing to lower absenteeism,

and turnover (Hackman & Oldham, 1976; Harter et al., 2002; Rentsch & Steel, 1998; Schmidt & Daume, 1993). Lastly, several research studies contend that of the three psychological conditions proposed by Kahn (1990), the strongest predictor of engagement is the meaningfulness (May et al., 2004; Rothmann & Rothmann, 2010; Shamir, 1991).

Safety

Early research on organizational change addressed the importance of creating a psychologically safe environment that provides a feeling of security and supports workers' capability for change (Schein & Bennis, 1965). Considered a fundamental characteristic in the workplace, psychological safety may influence an employee's ability to feel secure enough to ask questions, seek feedback, or propose new ideas without fear of negativity from a supervisor or co-workers (Edmondson, 2004; Kark & Carmeli, 2009). In his 1990 study, Kahn described psychological safety as the ability to "show and employ one's self without fear of negative consequences to self-image, status, or career" (p. 708). Further, Rich et al. (2010) suggests that "perceptions of social systems related to support and relationships are the primary influences on psychological safety" (p. 620).

The results of a 2009 study conducted by Carmeli, Brueller, and Dutton suggest that psychological safety is associated with the quality of interpersonal relationships and is expressed by how an individual feels and acts in relationships with others. Likewise, De Bruin and Taylor (2005) point out that "having good relationships with colleagues and supervisors at work is essential when having to spend the entire day surrounded by these people." (p. 750). Characteristics that have been considered as promoting psychological safety include the feelings of supportiveness from one's supervisor and co-

workers (Kahn, 1990) and trust (Edmondson, 1999; May et al., 2004). Likewise, adherence to co-worker norms have been identified as a factor which may potentially create feelings of reduced psychological safety (May et al., 2004; Olivier & Rothmann, 2007). Kahn (1990) found that the degree to which one feels it is safe to engage is determined by how consistent, predictable, and nonthreatening a situation appears to the individual. Accordingly, when an individual experiences unpredictable and inconsistent behaviors from his or her supervisor, co-worker, or within a group setting, trust is eroded and the proclivity to be engaged is diminished.

Availability

Psychological availability occurs when an individual feels capable and ready to physically, cognitively, and emotionally invest resources into his/her role performance (Crawford, Rich, Buckman, and Bergeron, 2014; Kahn, 1990). Four key factors identified by Kahn (1990) which may influence availability include emotional energies, physical energies, insecurity, and outside life. Specifically, emotional and physical energies refer to the amount of resources, whether emotional or physical, that an individual has to offer in a given situation. As a result, distractions at work and personal issues outside of work can negate emotional and physical energies, influencing an employee's ability to completely invest in his/her role performance. Likewise, an employee's lack of self-efficacy or insecurity in his/her own abilities may result in the inability to fully invest into a work role performance.

Studies pertaining to employee engagement and psychological availability have shown that a positive relationship exists (May et al., 2004; Olivier & Rothmann, 2007; Rothmann & Baumann, 2014.) For example, Rothmann and Baumann (2014) examined

employee engagement, the effects of work-home/home-work interaction along with the psychological conditions. The researchers concluded that positive work-home interactions (i.e. working environment considered fair/good) were positively related to psychological availability at work while negative home-work interactions (i.e. lack of support from family) were negatively related to psychological availability at work. The results of the study suggest that when the dynamics of the home-work/work-home interactions are negatively charged, an employee's cognitive, emotional, and physical resources may become strained and the employee may become psychologically unavailable, and ultimately disengaged from his/her work role. Likewise, De Bruin and Taylor (2005) suggest that personal issues such as financial and family problems can spill over and impact an employee's efficiency at work and may lead to increased stress for the employee and negatively influence his/her psychological availability.

The Operationalization of Kahn's Theory

Kahn's (1990) engagement model was operationalized by May et al. (2004) in a study involving employees in an administrative division of an insurance company located in the Midwest section of the United States. In the study, May et al. (2004) examined the factors suggested by Kahn (1990) that may influence the three psychological conditions of meaningfulness, safety, and availability. The factors posited to influence psychological meaningfulness include job enrichment, work role fit, and co-worker relations. Supervisor relations, co-worker relations, and adherence to co-worker norms were posited to influence psychological safety. Lastly, resources, self-consciousness, and outside activities were proposed determinants of psychological availability. May et al.'s (2004) study also examined the relationship of each psychological condition and its

relationship to work engagement as well as whether each psychological condition mediates the relation between its determinants and work engagement.

May et al. (2004) used path analysis to test each hypothesis as well as the overall model fit. In the original proposed theoretical model, the results suggest that job enrichment and work role fit were positively related to psychological meaningfulness. Rewarding co-worker relations and a supportive supervisor were positively related to one's feelings of psychological safety while adherence to co-worker norms was negatively related; participation in outside activities was negatively related to availability, and resources was positively related to availability. The relationship between both job enrichment and work role fit to engagement was fully mediated by meaningfulness. However, psychological safety only partially mediated the relationship between co-worker norms and engagement. In addition, both psychological meaningfulness and psychological safety were positively related to engagement. After revising the original framework, May et al. (2004) found that all three psychological conditions, meaningfulness, safety, and availability, were significant in determining an employee's engagement at work.

A search of the literature reveals several studies that are grounded in the works of Kahn (1990) and May et al. (2004). Olivier and Rothmann (2007) used the survey instrument designed by May et al. (2004) to explore the mediating effects of the three psychological conditions of meaningfulness, safety, and availability (Kahn, 1990) on work engagement in a multi-national oil company in South Africa. Olivier and Rothmann (2007) used the same factors suggested by May et al. (2004) to explore the influence of the three psychological conditions of meaningfulness, safety, and availability. However,

Olivier and Rothmann (2007) chose to exclude job enrichment and add job insecurity. Thus, the factors examined include work role fit, co-worker relations, supervisor relations, co-worker norm adherence, resources, self-consciousness, outside activities and job insecurity.

The participants represented a variety of departments and ranged from semi-skilled to professional. The results of Olivier and Rothmann's (2007) study indicated partial support of May et al.'s (2004) finding. For example, both studies found that psychological meaningfulness was positively related to work role fit and psychological availability was positively related to job resources and a decrease in one's self-consciousness, thus, mediating the effect on employee engagement. Further, both Olivier and Rothmann (2007) and May et al. (2004) contended that the strongest predictor of engagement was psychological meaningfulness and that psychological safety was positively related to engagement. In contrast to May et al. (2004), Olivier and Rothmann's (2007) study did not find that psychological safety mediated the relationship between co-worker relations, supervisor relations, and co-worker norms.

A study by van Zyl, Deacon, and Rothmann (2010) used a portion of May et al.'s (2004) instrument to explore how Industrial/Organizations psychologists in South Africa experienced meaningfulness at work. The study focused on work engagement, psychological meaningfulness, work role fit, and meaning of work. Similar to May et al. (2004), van Zyl et al. (2010) claim that work role fit predicts psychological meaningfulness and work role fit predicts work engagement. However, in contrast with both May et al. (2004) and Olivier and Rothmann (2007), van Zyl et al.'s (2010) study

did not find that psychological meaningfulness mediated the relationship between work role fit and work engagement.

A recent study situated within higher education in South Africa was conducted by Chikoko, Buitendach, and Kanengoni (2014). Using May et al.'s (2004) instrument, the researchers examined the relationship between engagement, the three psychological conditions as defined by Kahn (1990) and job characteristics. Additionally, the researchers assessed whether the three psychological conditions mediated the relationship between engagement and job characteristics. The participants included mostly administrators, with 60% female and 40.9% with postgraduate degrees. Similar to May et al. (2004), the study found that psychological meaningfulness was positively related to both job enrichment and rewarding co-worker relations and meaningfulness was reported to be the strongest predictor of engagement. Further, the relationship between engagement and job enrichment, work role fit, and rewarding co-worker relations was fully mediated by psychological engagement. However, unlike May et al. (2004), Chikoko et al.'s (2014) study did not find a relationship between psychological availability and outside activities.

Determinants of Psychological Meaningfulness

Drawing from Kahn's 1990 study, May et al. (2004) determined that job enrichment, work role fit, and co-worker relations are factors considered to influence psychological meaningfulness.

Job enrichment. In his 1990 study, Kahn asserted that an employee's job (task) characteristics could affect the degree of meaningfulness he/she experienced on the job. Both Kahn (1990) and May et al. (2004) point to the works of Hackman and Oldham

(1980) regarding job characteristics such as autonomy and skill variety which are considered a source of meaning in work. Likewise, May et al. (2004) asserts that the five core job dimensions of Hackman and Oldham's (1980) Job Characteristics Model (skill variety, task identity, task significance, autonomy, and feedback) have been linked to job enrichment, which in turn may influence an employee's experience of meaningfulness at work (Hackman, Oldham, Janson, & Purdy, 1975; Renn & Vandenberg, 1995).

May et al. (2004) used Hackman and Oldman's (1980) Job Diagnostic Survey to assess the relationship between job enrichment and an employee's experience of psychological meaningfulness and found that job enrichment was positively related to psychological meaningfulness. Additional research on job enrichment suggests that employees want more from work than a paycheck and benefits. Instead, employees want to feel competent and knowledgeable when performing tasks and seek to experience work as meaningful, worthwhile, and purposeful (Munn, 2013; Paul, Robertson, & Herzberg, 1969; Rothmann & Baumann, 2014).

Work role fit. The concept of work role fit is linked to meaningfulness such that the definition of meaning within the workplace is described as a fit between the work role requirements and values, beliefs, and behaviors of the employee (Brief & Nord, 1990; Hackman & Oldham, 1980; Spreitzer, 1995). Shamir (1991) suggests that individuals are more than just goal-oriented; rather individuals are also self-expressive. As such, individuals will gravitate towards work roles which allows them to authentically express their feelings and self-concepts.

In his study, Kahn (1990), indicated that "roles carried identities that organization members were implicitly required to assume" and to what degree the employees'

experienced psychological meaningfulness was influenced by “how well the roles fit how they saw or wanted to see their selves” (p. 706). Likewise, May et al. (2004) suggest that when a work role aligns with an employee’s self-concept (beliefs about one’s self), the employee may experience psychological meaningfulness. A study by Rothmann and Rothmann (2010) found that the strongest predictor of psychological meaningfulness was work role fit. Similarly, two studies, Cheng and Lu (2012) and May et al. (2004) concluded that both job enrichment and work role fit were positively related to psychological meaningfulness.

Co-worker relations. Research indicates that on a daily basis, over 90% of employees are likely to have routine interactions with co-workers for both job and social reasons (Chiaburu & Harrison, 2008). In fact, Schneider (1987) argues that co-worker relations (attitudes, behaviors, and feelings) are an integral part of the work environment and may actually define the environment. Locke & Taylor (1990) suggest that positive interpersonal interactions among co-workers may create a work environment which contributes to psychological meaningfulness. Similarly, Mayer, Keller, Leslie, and Hanges (2008) contend that employees have a desire to be a part of social collectives. Shamir (1991) states, “people derive meaning from being linked to social collectives through their identities” (p. 413), and Ryff (2000) highlights the importance of building quality ties to others which is “central to optimal living” (p. 30).

Dutton and Heaphy (2003) assert that the feeling of being connected to others at work may influence how important an employee views his/her work life such that, “when people are at work, connections with others compose the fabric of daily life” (p. 264). Iskasen (2000) performed a qualitative study involving 28 employees who performed

repetitive work. Seeking to understand the role of work-life meaningfulness, Iskasen's study found that 75% of the employees feel that their work life is meaningful while 89% of the employees agree that social relations (co-worker relations) relate to a meaningful work experience. Similarly, a study by Kinjerski and Skrypnek (2006) concluded that the feeling of connectedness among co-workers may support meaningfulness and a sense of community at work.

Determinants of Psychological Safety

May et al. (2004) suggested that supervisor relations, co-worker relations, and adherence to co-worker norms are factors that influence an employee's feelings of psychological safety.

Supervisor relations. Studies have shown a strong link between supervisor support and engagement (Bakker & Demerouti, 2007; Bakker, Demerouti, & Euwema, 2005; Li & Tan, 2013; Richman, Civian, Shannon, Hill, & Brennan, 2008.) In fact, Edmondson (2004) suggests that a fundamental responsibility of supervisors is to develop a work setting in which employees' sense and feel psychologically safe. In a 2007 study, van Vuuren, de Jong, and Seydel argue that employees are more committed to supervisors who listen to them and provide feedback. The study found that the most important factor for employees is receiving feedback from their supervisor, followed by the belief that the supervisor actively listens to his/her employees.

Research suggests that when supervisors use a participatory manner of including subordinates in the decision-making process, subordinates may perceive feelings of control, less uncertainty, and gain a better understanding of how and why supervisors reach certain decisions (Witt, Andrews, & Kacmar, 2000). As such, employees may feel

more inclined to speak freely and share ideas, adding to the perception of psychological safety. Similarly, Luthans and Peterson (2002) found that employees who were emotionally connected to their supervisor, believed their supervisor valued their opinions and cared about their personal and professional growth, were more likely to respond favorably to their supervisor. Likewise, when supervisors exhibit trustworthy characteristics such as consistency in behavior, open communication, behavioral integrity, delegation of control and genuine concern for others, employees may experience feelings of psychological safety, which in turn may encourage a heightened sense of employee engagement (Li and Tan, 2013; May et al., 2004; Whiteney, Brodt, Korsgaard, & Werner, 1998).

Rewarding co-worker relations. Co-worker relations were discussed within the framework of psychological meaningfulness; however, Kahn (1990) and May (2004) also address the importance of interpersonal relationships with co-workers, which encourages a supportive and trusting environment. Edmondson (2004) suggests that “psychological safety describes individuals’ perceptions about the consequences of interpersonal risks in their work environment” (p. 241). Likewise, interpersonal interactions between an employee and co-workers may help to shape the employee’s sense of psychological safety within the work environment. As such, when interactions are positively consistent, the employee may be more willing to openly contribute and share ideas, thus engaging in the work environment (Edmondson, 2002).

A 2009 study found that high quality relationships among co-workers foster psychological safety. Specifically, when high quality relationships exist, employees are more likely to have shared knowledge, shared goals as well as mutual respect. As a result,

when a failure occurs within the working environment, employees are more likely to voice concerns and learn from the failure, while supporting one another in a psychologically safe environment (Carmeli & Gittell, 2009).

Adherence to co-worker norms. Norms are social expectations that guide the attitude, behavior, and emotional dimensions of members within a group (Hackman, 1986; Hochschild, 1983.) Kahn (1990) explored organizational norms and suggested that an employee who remained within the generally accepted borders of appropriate behaviors was more inclined to feel psychologically safe at work. May et al. (2004) took a slightly different approach by focusing on co-worker related norms, arguing that the actions of co-workers are what influence individual employees the most. According to Feldman (1984), “Only those behaviors that ensure group survival, facilitate task accomplishment, contribute to group morale, or express the group’s central values are likely to be brought under normative control” (p. 52). Likewise, research related to social information processing approach suggests that within the work environment, an employee will observe and rely on information gathered from others related to norms, values, and expectations to guide his/her own behavior (Salancik & Pfeffer, 1978).

Although norms may provide fundamental boundaries for acceptable behaviors (Kahn, 1990), May et al. (2004) suggest that an employee may experience a decrease in psychological safety when he/she feels pressure to adhere to normative behaviors established by co-workers. Likewise, Barker (1993) contends that many organizations have moved from a rigid, bureaucratic style of control to concertive control by group members. In a concertive control environment, workers come to a consensus on group behaviors as they relate to a set of core values. Further, Barker (1993) states that,

“concertive control reflects the adoption of new substantive rationality, a new set of consensual values, by the organization and its members” (p. 411). On the surface, the concept of concertive control may appear advantageous to work groups. However, Barker’s 1993 study revealed that “the combination of peer pressure and rational rules in the concertive system creates a new iron cage whose bars are almost invisible to the workers it incarcerates” (p. 435). Similarly, a 2011 study found that uncivil behavior among co-workers may create an atmosphere that is threatening and unpredictable, such that an employee feels less inclined to safely express his/herself (Reio & Sanders-Reio, 2011).

Determinants of Psychological Availability

May et al. (2004) contend that self-consciousness, resources, and outside activities are factors that may influence an employee’s ability to be psychologically available at work.

Self-consciousness. Kahn (1990) contends that psychological availability is linked to “how secure people felt about their work and their status” (p. 715) and may influence how much energy an individual is willing to devote to a role performance. Likewise, Rich et al. (2010) assert that “self-perceptions of confidence and self-consciousness are the primary influences on psychological availability” (p. 620). As such, an increase in self-consciousness may lead an employee to focus more on inner thoughts, how he/she is perceived by others, and may negatively impact the employee’s task performance. Kahn (1990) contends that feelings of insecurity may cause an employee to develop anxieties, which in turn may cause a distraction and disengagement from work. Thus, Kahn (1990) argued that self-consciousness is negatively related to psychological availability.

The study by May et al. (2004) did not discover that a significant relationship exists between self-consciousness and availability. However, using May et al.'s (2004) instrument, both Olivier and Rothmann (2007) and Rothmann and Rothmann's (2010) studies found that self-consciousness had a significantly negative relationship with availability. Further, Olivier and Rothmann (2007) confirmed that psychological availability mediated the relationship between self-consciousness and work engagement.

Resources. Kahn (1990) identified physical and emotional energies as resources needed by an employee in order to personally engage at work. Physical energies refers to an employee's ability to meet the physical demands of a job through stamina, strength, and mental flexibility (Kahn, 1990; May et al., 2004; Rothmann & Baumann, 2014). Kahn (1990) provided examples of employees who experienced depletion of physical energies, leading to disengagement. The more obvious example of an employee exerting physical energies was the camp counselor who spent all day in the sun working with kids. Kahn's (1990) second example involved an architect with a desk job. After spending eight hours a day leaning over a drafting board, the architect complained of back and neck pain which led to physical exhaustion by the end of the day.

An employee is willing to invest emotional energies when he/she feels strongly involved and emotionally attachment to his/her work (May et al., 2004; Rothmann & Baumann, 2014). However, research related to incivility in the workplace suggests that when a supervisor is rude and disrespectful towards an employee, the employee may feel less likely to have the resources and support necessary to perform well. As a result, the employee may become emotionally unavailable from his/her role (Reio & Sanders-Reio, 2011).

Kahn (1990) did not explicitly include cognitive resources in his model; however, May et al. (2004) suggested the importance of this resource which suggests being cognitively alert, completely immersed, and focused in one's work. As a result, May et al.'s (2004) instrument includes statements related to cognitive resources. Studies conducted by both May et al. (2004) and Olivier and Rothmann (2007) found a positive relationship between resources and psychological availability.

Outside activities. Research suggests that involvement in activities outside of work, such as school, memberships, second jobs, and volunteerism, may create a distraction and diminish an employee's focus on his/her tasks. As such, when an employee's energy is drawn away from work, the employee is less likely to be psychologically available for his/her work role (Hall & Richter, 1988; Kahn, 1990; May et al., 2004; Rothmann & Baumann, 2014). In contrast, a study related to engagement in family and work roles suggest that family engagement has the potential to translate to engagement at work for females (Rothbard, 2001). The study contends that enrichment occurs when an individual is committed to and engaged in multiple roles. Likewise, positive emotions associated with enrichment in multiple roles (family and work) may lead to energy expansion, the idea that an individual will find the needed energy to accomplish things and tasks the individual enjoys (Marks, 1977; Rothbard, 2001). Rothbard's study (2001) did not show a relationship between family engagement and work engagement for men. Subsequently, in May et al.'s (2004) study, outside activities were found to be negatively related to psychological availability at work. Further, availability mediated the relationship between outside activities and engagement.

Summary

May et al. (2004) indicated that their study was limited to a particular sector of white-collar employees with narrow work roles and that further research is necessary “to explore whether the relations we found in the study generalize to other organizational settings as the determinants of the psychological conditions may vary in their importance in the model” (p. 32). As such, several studies have been conducted using May et al.’s (2004) study and their respective instrument. One study focused on a group of psychologists while another study examined semi-skilled to professional employees in a South African oil company (Olivier & Rothmann, 2007; van Zyl, Deacon, & Rothmann, 2010). Similarly, a recent study was conducted within higher education in South Africa but was specific to administrators (Chikoko, Buitendach, & Kanengoni, 2014).

For the most part, participants of studies using May et al.’s (2004) framework have been white-collar employees. Thus, little is known about engagement and blue-collar workers within the framework of May et al.’s (2004) study. Accordingly, this study explored employee engagement and the factors that may influence employee engagement, with a focus on understanding the mediating effects of the three psychological conditions: meaningfulness, safety, and availability (Kahn, 1990) within the context of blue-collar employees, specifically community college maintenance employees.

CHAPTER III - METHODOLOGY

Overview

This study sought to examine factors that may influence employee engagement in maintenance employees, the sector of employees classified as blue-collar workers, in a community college setting. Kahn (1990) contended that three psychological conditions: meaningfulness, safety, and availability, may influence employee engagement through the psychological experiences in the work role. Further, research conducted by Kahn (1990) and May et al. (2004), suggested that the factors that may influence meaningfulness include job enrichment, work role fit, and co-worker relations. The factors that may influence safety are supportive supervisor relations, rewarding co-worker relations, and adherence to co-worker norms. Lastly, the factors that may influence availability include resources, self-consciousness, and outside activities.

Prior studies related to the three psychological conditions theorized by Kahn (1990) to influence an employee to engage in a work role have focused primarily on educators or employees in business and industry (Chikoko, et al., 2014; May et al., 2004; Olivier & Rothmann, 2007). As such, this study explored whether the relations found in previous studies generalize to blue-collar workers, specifically, community college maintenance employees. Using a non-experimental, cross-sectional design, the researcher proposed to address seven research hypotheses.

Research Hypotheses

RH₁: Job enrichment, work role fit, and/or co-worker relations will be related to psychological meaningfulness.

- a. Job enrichment will be positively related to psychological meaningfulness.

- b. Work role fit will be positively related to psychological meaningfulness.
- c. Co-worker relations will be positively related to psychological meaningfulness.

RH₂: Supportive supervisor relations, rewarding co-worker relations, and/or adherence to co-worker norms will be related to psychological safety.

- a. Supportive supervisor relations will be positively related to psychological safety.
- b. Rewarding co-worker relations will be positively related to psychological safety.
- c. Adherence to co-worker norms will be negatively related to psychological safety.

RH₃: Resources, self-consciousness, and/or outside activities will be related to psychological availability.

- a. Resources will be positively related to psychological availability at work.
- b. Self-consciousness will be negatively related to psychological availability at work.
- c. Outside activities will be negatively related to psychological availability at work.

RH₄: Psychological meaningfulness, psychological safety, and/or psychological availability will be related to engagement at work.

- a. Psychological meaningfulness will be positively related to engagement at work.
- b. Psychological safety will be positively related to engagement at work.

c. Psychological availability will be positively related to engagement at work.

RH₅: Psychological meaningfulness mediates the relationship between its determinants (i.e. job enrichment, work role fit, and co-worker relations) and work engagement.

RH₆: Psychological safety mediates the relationship between its determinants (i.e. co-worker relations, supervisor relations, and co-worker norms) and work engagement.

RH₇: Psychological availability will mediate the relationship between its determinants (i.e. resources, self-consciousness, and outside activities) and engagement at work.

Research Design and Procedures

The researcher used a non-experimental design utilizing cross-sectional survey methodology since the goal of the study was to examine the relationship between a set of variables at a given point in time (Leedy & Ormrod, 2013). As shown in Figure 1, the variables for this study are employee engagement, meaningfulness, safety, availability, job enrichment, work role fit, co-worker relations, supervisor relations, co-worker norms, resources, self-consciousness, and outside activities. The variables selected were derived from Kahn's (1990) theory-generating qualitative study of personal engagement and disengagement at work as well as a study by May et al. (2004) in which Kahn's study was operationalized to provide a quantitative measure of employee engagement and the determinants of employee engagement.

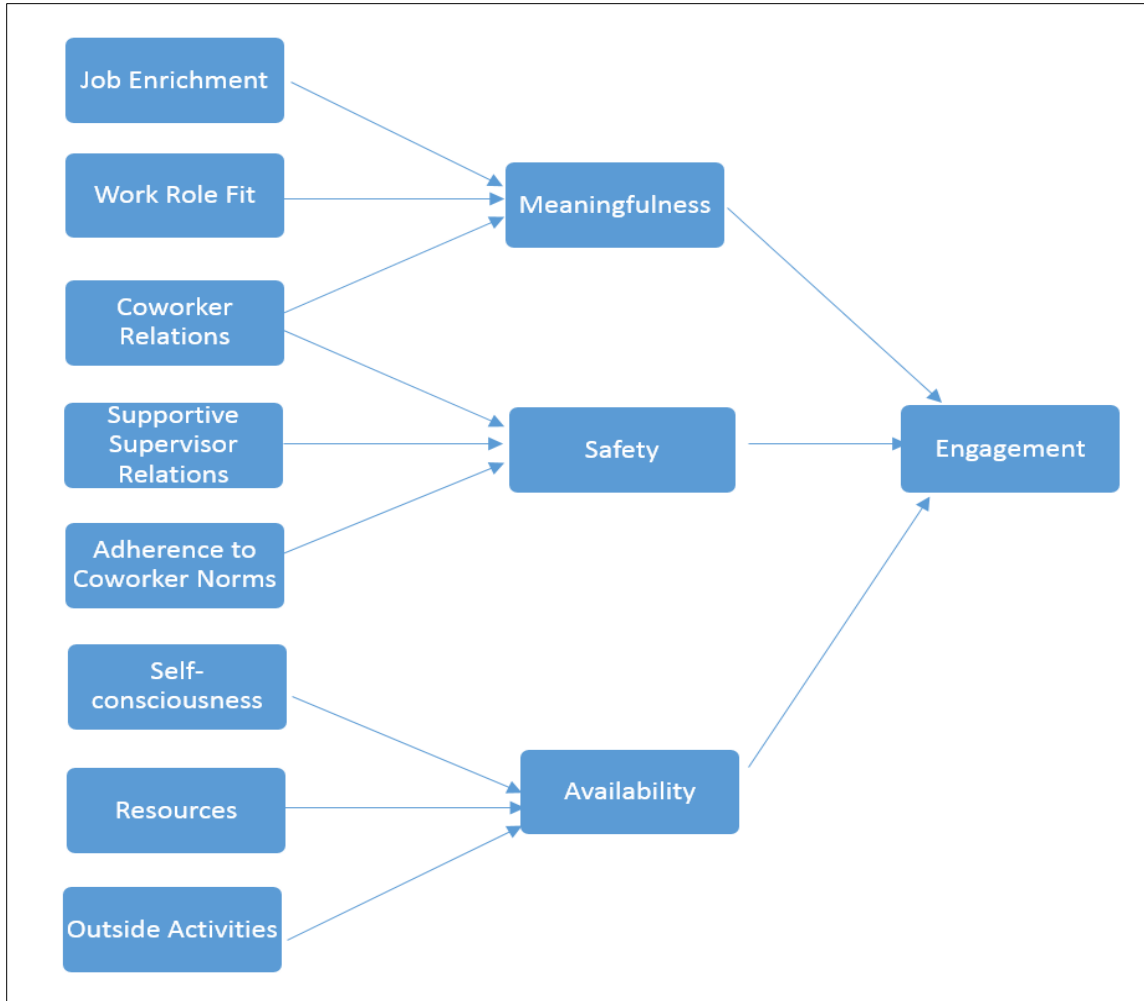


Figure 1. Research Model

Procedure

The researcher obtained approval from the Institutional Review Board at The University of Southern Mississippi and the 15 community colleges in Mississippi via the The Council on Institutional Research and Effectiveness (CIRE) subcommittee on External Research Approval for the Mississippi Community Mississippi Association of Community & Junior Colleges (MACJC). After receiving approval, the researcher contacted the Institutional Research (IR) director at each community college. The IR director assisted the researcher with contacting the Superintendent of Maintenance or

Physical Plant Director. In addition, the IR director assisted with reserving a computer lab at the respective college to conduct the survey. The researcher worked directly with the Superintendents of Maintenance/Physical Plant Directors to schedule a date and time for participants to complete the survey. Participation in the survey was strictly voluntary. The researcher visited the assigned computer lab at each respective institution and worked in conjunction with the lab monitor to help employees with questions regarding logging into the survey. The survey was administered via Qualtrics Survey Software, a web-based questionnaire. To ensure the participants' intent to respond to the pre-defined survey statements, the instructions for the on-line survey included a formal consent which served as the official documentation. The collected data is secured in a password-protected data-warehouse.

Participants

The participants for the study consisted of individuals who were currently employed in a maintenance department at one of the 15 community colleges in Mississippi. The employees within the maintenance departments are generally hourly workers who are either skilled craftsmen (e.g. electricians, plumbers), grounds employees (e.g. using mowers, power washers, weed eaters), or building custodians. The researcher verified that all 15 Mississippi community colleges handle maintenance in-house rather than outsourcing the department (Batiste, personal communication, July 31, 2015). Likewise, 10 of the 15 community colleges provided a count of maintenance, grounds, and custodians employed at their respective institutions. Not accounting for the community colleges that did not provide the requested data, the researcher confirmed a potential sample size of 459 participants.

Instrumentation

Grounded in Kahn's (1990) qualitative research related to engagement and the psychological conditions that may influence engagement, May et al. (2004) developed a survey instrument that provided for a quantifiable method of examining engagement as theorized by Kahn (1990). May et al.'s (2004) survey instrument consists of 12 scales for a total of 81 items (Appendix A). The 12 scales are comprised of the previously mentioned variables of this study. A five-point Likert scale is used, ranging from strongly disagree to strongly agree.

Engagement

The concept of psychological engagement derives from Kahn's (1990) theory that individuals physically, emotionally, and cognitively invest in work roles at varying intensities. May et al. (2004) initially conducted an exploratory factor analysis containing 24 items based on Kahn's theory that the three dimensions of engagement (cognitive, emotional, and physical) may be distinct from one another. However, May et al.'s (2004) data did not reveal three reliable and separate scales representing cognitive, emotional, and physical engagement. As a result, May et al. (2004) elected to use an overall scale consisting of thirteen items ($\alpha = .77$) that revealed good reliability and suggested balance across cognitive, emotional, and physical engagement. Subsequent studies have used May et al.'s (2004) 12 item measure, referred to as *The Work Engagement Scale* and reported alpha reliability coefficients of 0.72 (Olivier & Rothmann, 2007), 0.93 (van Zyl, Deacon, & Rothmann, 2010), and 0.78 (Chikoko, Buitendach, & Kanengoni, 2014).

Based on Kahn's (1990) assertion that individuals choose to engage or disengage based on meaningfulness, safety, and availability, the three psychological conditions were measured as follows:

Meaningfulness

Drawing from Speitzer (1995) and May's 2003 unpublished manuscript, May et al. (2004) compiled a scale for the psychological condition of meaningfulness ($\alpha = .90$) consisting of six items to assess the degree of psychological meaningfulness experienced by individuals in activities related to their work. Subsequent studies refer to May et al.'s (2004) six item measure as *The Psychological Meaningfulness Scale* and report alpha coefficient reliabilities of 0.92 (Olivier & Rothmann, 2007), 0.91 (Rothmann & Rothmann, 2010), 0.85 (van Zyl, Deacon, & Rothmann, 2010), and 0.95 (Chikoko, Buitendach, & Kanengoni, 2014).

Safety

Based on the works of Kahn (1990), May et al. (2004) developed a scale to measure the psychological perception of safety ($\alpha = .71$) consisting of three items. The scale assesses whether individuals report feeling at ease to express their opinions and to be themselves at work as well as whether the individuals report feeling the environment at work is threatening. However, subsequent studies using the three items from May et al.'s (2004) study to measure psychological safety resulted in lower alpha coefficient reliabilities than found in May et al.'s (2004) study. For instance, Olivier and Rothmann (2007) obtained a Cronbach alpha coefficient of 0.41 and Rothmann & Rothmann (2010) found a Cronbach alpha coefficient of 0.60.

Availability

May et al. (2004) created a scale to measure the psychological condition of which was based on the works of Kahn (1990). The scale consists of five items ($\alpha = .85$) and measures the confidence of individuals in regard to their ability to be physically, emotionally, and cognitively available for work. Subsequent studies used the five items referred to as the *Psychological Availability Scale* and found alpha coefficients of 0.80 (Chikoko, Buitendach, & Kanengoni, 2014), 0.84 (Rothmann & Rothmann, 2010), and 0.90 (Vinarski-Peretz, & Carmeli, 2011).

Determinants of Psychological Meaningfulness

May et al. (2004) determined three factors that may influence psychological meaningfulness: job enrichment, work role fit, and co-worker relations.

Job enrichment. Drawing from the Job Diagnostic Survey (JDS; Hackman & Oldman, 1980), May et al. (2004) measured job enrichment by averaging 15 items ($\alpha = .85$). The JDS assesses the five job-related dimensions through the use of three items for each dimension. The job-related dimensions are task identity, skill variety, autonomy, task significance, and feedback. A subsequent study by Chikoko et al. (2014) referred to this scale as the *Job Enrichment Scale* and reported a reliability coefficient of 0.79.

Work role fit. Drawing from May's 2003 unpublished manuscript, the second factor, work role fit ($\alpha = .92$), consists of four items to measure self-concept and perception of fit with one's job. Referred to as the *Work role Fit Scale* in subsequent studies, alpha coefficients were reported as 0.90 for studies by both Chikoko, Buitendach, and Kanengoni (2014) and Olivier and Rothmann (2007). Rothmann and Hamukang'anu (2013) reported an alpha coefficient of 0.82.

Co-worker relations. Co-worker relations ($\alpha = .93$) consists of 10 items derived from May's 2003 unpublished manuscript. The items measure whether the individual feels valued and connected to co-workers such that mutual respect exists and trust exists. The *Co-worker Relations Scale* was used in subsequent studies which reported alpha coefficients of 0.86 (Chikoko, Buitendach, & Kanengoni, 2014) and 0.95 (Olivier and Rothmann, 2007).

Determinants of Psychological Safety

May et al. (2004) identified three factors which may influence psychological safety: co-worker relations, supervisor relations, and co-worker norms.

Co-worker relations. May et al. (2004) suggests that co-worker relations may influence both psychological meaningfulness and psychological safety. As such, the 10 items previously mentioned ($\alpha = .93$) were used to assess the relationship with both meaningfulness and safety. The *Co-worker Relations Scale* was used in subsequent studies which reported alpha coefficients of 0.86 (Chikoko, Buitendach, & Kanengoni, 2014) and 0.95 (Olivier & Rothmann, 2007).

Supervisor relations. May et al. (2004) averaged 10 items ($\alpha = .95$) to assess supervisor relations. Of the 10 items, the first six derived from Oldham and Cummings (1996) and the remaining 4 from Butler (1991). The items measure an employee's perception of whether his or her supervisor is supportive, encouraging, trustworthy, helpful, and fair. Using the *Supervisory Relations Scale*, Olivier and Rothmann (2007) found a reliability coefficient of 0.96 and Chikoko, Buitendach, and Kanengoni (2014) found a reliability coefficient of 0.95.

Co-worker norms. May et al. (2004) developed a 3-item scale ($\alpha = .61$) to measure the degree to which an employee adheres to co-worker norms and does what the employee feels that co-workers expect. Using the 3-item scale, Olivier and Rothmann (2007) found an alpha coefficient of 0.71.

Determinants of Psychological Availability

May et al. (2004) identified three factors which may influence psychological availability: self-consciousness, resources, and outside activities.

Self-consciousness. May et al. (2004) developed three items ($\alpha = .83$) to assess public self-consciousness at work. The scale measures whether an individual is worried about how he or she is regarded by work colleagues. *The Self-consciousness Scale* was used in subsequent studies which reported alpha coefficients of 0.86 (Olivier & Rothmann, 2007) and 0.78 (Rothmann & Rothmann, 2010).

Resources. The degree in which an individual has the essential resources (physical, emotional, and cognitive) to become available for engaging at work was measured by averaging eight items ($\alpha = .91$) that May et al. (2004) developed for their study. *The Job Resources Scale* was used in subsequent studies with reported reliability alpha coefficients of 0.91 (Olivier & Rothmann, 2007) and 0.84 (Chikoko, Buitendach, & Kanengoni, 2014).

Outside activities. May et al. (2004) assessed the degree of an individual's involvement in activities outside of the organization by measuring one item that asked, "How many hours per week do you participate in organizations other than (the company's name)?" Examples such as church, school, second jobs, and volunteering

were given. The choices were: 1 = 1 to 5 hours, 2 = 6 to 10 hours, 3 = 11 to 15 hours, 4 = 16 to 20 hours, and 5 = 21 + hours.

May et al. (2004) conducted a principal components factor analysis in order to determine if the measures identified were distinct from one another. An examination of the exogenous variables revealed 14 factors with eigenvalues greater than 1.00, with the greatest factor explaining 23.9% of the variance and being comprised of supervisor relations items. Likewise, May et al. (2004) found that the “scale items loaded on their respective constructs and did not cross-load on the other factors” (p. 22) and further contend that factor analyses results offer support to the discriminant validity of the measures.

Data Analysis

The researcher performed path analysis techniques using Mplus version 7.4 to test the proposed hypothesized model. Structural equation modeling (SEM) was used to examine the direct and indirect effects between the variables of engagement, meaningfulness, safety, availability, job enrichment, work role fit, co-worker relations, supervisor relations, co-worker norms, resources, self-consciousness, and outside activities. Likewise, path co-efficients were calculated for each research hypothesis. In an effort to obtain an adequate sample size, the researcher needed between 200-300 completed surveys. Accordingly, an adequate sample size was met with a total of 452 participants completing the survey.

Path analysis was used to measure the relationships among variables. As such, twelve direct, non-mediated relationships were tested. These include job enrichment and meaningfulness, work role fit and meaningfulness, co-worker relationships and

meaningfulness, supervisor relations and safety, co-worker relations and safety, co-worker norms and safety, resources and availability, self-consciousness and availability, outside activities and availability, meaningfulness and engagement, safety and engagement, and availability and engagement.

Structural equation modeling programs (SEM) provide flexibility necessary for estimation options and mediation models specifications (Preacher & Hayes, 2008). As such, three proposed mediated relationships were examined using SEM. These include whether meaningfulness mediates the relationship between its determinants (i.e. job enrichment, work role fit, and co-worker relations) and engagement; safety mediates the relationship between its determinants (i.e. co-worker relations, supervisor relations, and co-worker norms) and engagement; and availability mediates the relationship between its determinants (i.e. resources, self-consciousness, and outside activities) and engagement.

To test the hypotheses for intervening variable effects (mediation), a bootstrapping method was utilized. Bootstrapping, as described by Preacher and Hayes (2004), has advantages over other inferential techniques such that it does not make assumptions in regards to the shape of an indirect effect's sampling distribution. The process to test for mediation with bootstrapping consists of using the original sample size obtained from data and repeatedly resampling the data whereas the indirect effect in each re-sampled data set is estimated. The resampling process is repeated between 1000 to 5000 times. After calculating the approximate value of the sampling distribution of the indirect effects, the confidence intervals (CI) can be constructed (Preacher & Hayes, 2008).

Summary

The methodology for this study consisted of administering a survey instrument developed by May et al. (2004) based on the works of Kahn (1990). The researcher examined the relationships between employee engagement, the three psychological conditions of engagement: meaningfulness, safety, and availability along with the factors that may influence each of the psychological conditions. Thus, this study sought to provide answers to the proposed research questions presented in this chapter.

CHAPTER IV – ANALYSIS OF DATA

Overview

This study sought to examine the relationship between employee engagement and the factors that may influence the three psychological conditions of engagement: meaningfulness, safety, and availability. Further, the factors that may influence meaningfulness (job enrichment, work role fit, and co-worker relations), safety (supportive supervisor relations, rewarding co-worker relations, and adherence to co-worker norms) and availability (resources, self-consciousness, and outside activities) were examined to determine if relationships exist. Lastly, a mediation model was used to determine whether meaningfulness mediates the relationship between its determinants (i.e. job enrichment, work role fit, and co-worker relations) and work engagement, safety mediates the relationship between its determinants (i.e. co- worker relations, supervisor relations, and co-worker norms) and work engagement, and availability mediates the relationship between its determinants (i.e. resources, self-consciousness, and outside activities) and work engagement.

The current research study was quantitative and involved surveying maintenance, grounds, and custodial personnel employed at the 15 Mississippi community colleges. No other demographics were obtained from the participants. Data were collected using Qualtrics survey software and extracted into a SPSS data file. A total of 496 participants logged into the survey. A total of 452 participants responded to all 81 statements in the survey. Using SPSS, the researcher reverse scored all applicable items from the survey in SPSS (survey items 2, 7, 11, 13, 21, 22, 30, 33, 36, 39, 42, 71, 72, 74, 75, 76, 77 and 80). Next, the researcher ran Cronbach's alpha to measure internal

consistency of each scale consisting of one or more statements. Although a measurement result of .70 or higher is considered the standard, research suggests the required coefficient should vary depending on the circumstance of the measurement. Likewise, the item count in a scale, as well as, the sample size can influence consideration for an acceptable reliability (Ponterotto & Ruckdeschel, 2007). The scales include engagement, meaningfulness, safety, availability, job enrichment, work role fit, rewarding co-worker relations, supportive supervisor relations, co-worker norms, resources, and self-consciousness. A Cronbach's alpha could not be obtained for the outside activities scale because it only consisted of one statement. Further, the researcher removed statements from the engagement scale, safety scale, and the self-consciousness scale in order in order to obtain acceptable alphas. The statements were removed for the remainder of the study. Table 1 shows the internal consistency (Cronbach's alpha) for each scale represented in the engagement survey.

Table 1

Cronbach's Alpha for each scale on the Engagement Survey

Scale Variable	Cronbach's Alpha
Engagement	0.65
Meaningfulness	0.90
Safety	0.53
Availability	0.87
Job Enrichment	0.70
Work Role Fit	0.85
Coworker Relations	0.93
Supervisor Relations	0.95

Table 1 (continued)

Scale Variable	Cronbach's Alpha
Coworker Norms	0.61
Resources	0.75
Self-Consciousness	0.76

Reliability Results of Survey Scales

Engagement

Initially, the engagement scale consisted of thirteen items used by May et al. (2004) to measure cognitive, emotional, and physical engagement with a reported alpha reliability coefficient of 0.77. Due to a low Cronbach's alpha of 0.56, the researcher removed statements "I often think about other things when performing my job" and "I often feel emotionally detached from my job." The remaining 11 statements resulted in an acceptable Cronbach's alpha of .65.

Meaningfulness

The researcher used May et al.'s (2004) meaningfulness scale consisting of six items to assess the degree of psychological meaningfulness experienced by individuals in activities related to their work. Both May et al. (2004) and the researcher obtained a Cronbach's alpha of .90 for the measure.

Safety

The researcher used May et al.'s (2004) safety scale consisting of three items ($\alpha = .71$) used to measure the psychological perception of safety. The researcher obtained a lower alpha coefficient reliability than found in May et al.'s (2004) study (Oliver &

Rothmann, 2007; Rothmann & Rothmann, 2010). After removing the statement, “I’m not afraid to be myself at work,” the researcher obtained a Cronbach’s alpha of .534.

Availability

Using a 5-item scale created by May et al. (2004), availability measured the confidence of individuals in regard to their ability to be physically, emotionally, and cognitively available for work. The Cronbach’s alpha for this measure was .87, similar to the reliability of .85 reported by May et al. (2004).

Job Enrichment

Job enrichment was measured by averaging 15 items ($\alpha = .70$) from the Job Diagnostic Survey (JDS; Hackman & Oldman, 1980) which assesses the five job-related dimensions of task identity, skill variety, autonomy, task significance, and feedback. May et al. (2004) originally measured job enrichment by averaging the same 15 items and obtained a reliability of .85.

Work Role Fit

Using May et al.’s (2004) work role fit scale consisting of four items related to self-concept and perception of fit with one’s job, the researcher obtained a Cronbach’s alpha of .85. Studies subsequent to May et al. (2004) referred to the four items as the *Work role Fit Scale* and reported alpha coefficients of 0.90 (Chikoko, Buitendach, & Kanengoni, 2014; Olivier & Rothmann, 2007) and 0.82 (Rothmann & Hamukang’anu, 2013).

Co-worker Relations

May et al. (2004) suggest that co-worker relations may influence both psychological meaningfulness and psychological safety. The co-worker relations scale

consists of 10 items derived from May's 2003 unpublished manuscript measuring whether the individual feels valued and connected to co-workers such that both mutual respect and trust exists. Both May et al. (2004) and the researcher obtained a Cronbach's alpha of .93 for this measure.

Supervisor Relations

Using 10 items, four from Butler (1991) and six from Oldham and Cummings (1996), May et al. (2004) developed a scale to assess supervisor relations. The items measure an employee's perception of whether his or her supervisor is supportive, encouraging, trustworthy, helpful, and fair. Both May et al. (2004) and the researcher obtained a Cronbach's alpha of .95 for this measure.

Co-Worker Norms

May et al. (2004) developed a 3-item scale to measure to what degree an employee adheres to co-worker norms and does what the employee feels coworkers expect. Both May et al. (2004) and the researcher obtained a Cronbach's alpha of .61 for this measure.

Self-consciousness

To measure to what extent an employee is worried about how he or she is regarded by work colleagues, May et al. (2004) developed a 3-item scale ($\alpha = .83$) to assess public self-consciousness at work. Subsequent studies reported alpha coefficients of 0.86 (Olivier & Rothmann, 2007) and 0.78 (Rothmann & Rothmann, 2010). Due to a low Cronbach's alpha, the researcher removed the question, "I don't worry about being judged by others at work" resulting in acceptable reliability of .76.

Resources

May et al. (2004) developed an 8-item scale ($\alpha = .91$) to measure the degree in which an individual has the essential resources (physical, emotional, and cognitive) to become available for engaging at work. Studies subsequent to May et al. (2004) reported reliability alpha coefficients of 0.91 (Olivier & Rothmann, 2007) and 0.84 (Chikoko, Buitendach, & Kanengoni, 2014). Using the same 8 items, the researcher obtained a Cronbach's alpha of .75.

Outside Activities

May et al. (2004) assessed the degree of an individual's involvement in activities outside of the organization by measuring one item that asked, "How many hours per week do you participate in organizations other than (the company's name)?" Examples such as church, school, second jobs, and volunteering were given. The choices were: 1 = 1 to 5 hours, 2 = 6 to 10 hours, 3 = 11 to 15 hours, 4 = 16 to 20 hours, and 5 = 21 + hours. Because only one statement was presented for outside activities, a Cronbach's alpha could not be obtained.

Data from SPSS were loaded into MPlus software (version 7.4; Muthén & Muthén, 1998-2016). The researcher chose path analysis, a statistical technique that calculates path co-efficients, to measure the magnitude of the relationships among the twelve direct, non-mediated paths. These include job enrichment and meaningfulness, work role fit and meaningfulness, co-worker relationships and meaningfulness, supervisor relations and safety, co-worker relations and safety, co-worker norms and safety, resources and availability, self-consciousness and availability, outside activities and availability, meaningfulness and engagement, safety and engagement, and availability and engagement.

Path analysis, a subset of structural equation modeling (SEM), allows variables to be both dependent and independent in the same model. Ullman (2006), defines SEM as “a collection of statistical techniques that allow a set of relations between one or more independent variables (IVs), either continuous or discrete, and one or more dependent variables (DVs), either continuous or discrete, to be examined” (p. 35). Likewise, Preacher and Hayes (2008) suggest using SEM for mediation due to the flexibility in both estimation options and model specification. As such, the researcher used SEM to examine the total, direct, and indirect effects between the variables in the model. Bootstrapping, a common method used in mediation, involves resampling observed data in order to produce the required sampling distribution (MacKinnon, Fairchild, & Fritz, 2007). Bootstrapping was used to test whether meaningfulness mediates the relationship between its determinants (i.e. job enrichment, work role fit, and co-worker relations) and engagement; safety mediates the relationship between its determinants (i.e. co-worker relations, supervisor relations and co-worker norms) and engagement; and availability mediates the relationship between its determinants (i.e. resources, self-consciousness and outside activities) and engagement.

Findings

The first three research hypotheses examine whether a relationship exists between meaningfulness and the variables of job enrichment, work role fit, and co-worker relations; safety and the variables of supervisor relations, co-worker relations, and co-worker norms; as well as availability and the variables of resources, self-consciousness, and outside activities. Figure 2 shows the beta coefficients obtained for each of the relationships measured in research hypothesis one – four. The first research hypothesis

(RH₁) asserts that job enrichment, work role fit, and/or co-worker relations will be related to psychological meaningfulness. Consistent with the researcher's hypothesis, job enrichment is positively related to psychological meaningfulness ($\beta = .158, p < .05$), and work role fit is positively related to psychological meaningfulness ($\beta = .232, p < .05$). However, the results indicate that no relationship exists between co-worker relations and psychological meaningfulness. ($\beta = .008, p > .05$). The second research hypothesis (RH₂) asserts that supportive supervisor relations, rewarding co-worker relations, and/or adherence to co-worker norms will be related to psychological safety. Consistent with the researcher's hypothesis, supportive supervisor relations is positively related to psychological safety ($\beta = .188, p < .05$), rewarding co-worker relations is positively related to psychological safety ($\beta = .196, p < .05$), and adherence to co-worker norms is negatively related to psychological safety ($\beta = .155, p < .05$). The third research hypothesis (RH₃) asserts that resources, self-consciousness, and/or outside activities will be related to psychological availability. Consistent with the researcher's hypothesis, resources is positively related to psychological availability at work ($\beta = .121, p < .05$). However, the results indicate that a relationship does not exist between self-consciousness and psychological availability at work ($\beta = -.072, p > .05$) or between outside activities and psychological availability at work ($\beta = .015, p > .05$). The fourth research hypothesis (RH₄) asserts that psychological meaningfulness, psychological safety, and/or psychological availability will be related to engagement at work. Consistent with the researcher's hypothesis, psychological meaningfulness is positively related to engagement at work ($\beta = .475, p < .05$), and psychological availability is positively related to engagement at work ($\beta = .221, p < .005$). In contrast, results indicate

that a relationship does not exist between psychological safety and engagement at work ($\beta = -.041, p > .05$).

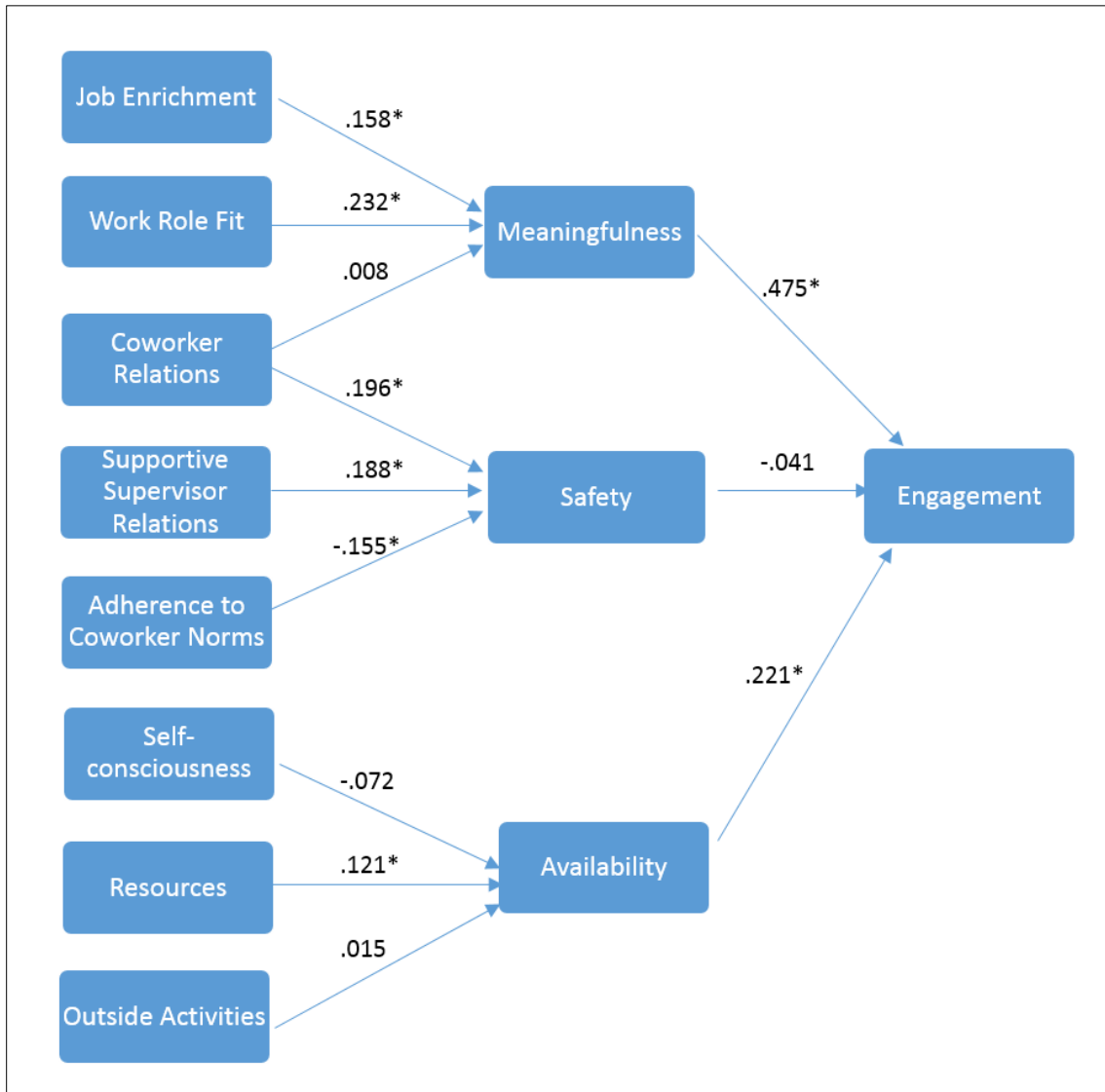


Figure 2. Research Model with Path Coefficients

Note: * $p < .05$

Mediation

The remaining research hypotheses examine the effects of mediation within the research model. To test for mediation, the researcher used bootstrapping. Bootstrapping consists of repeating the resampling process 5,000 times in order to obtain 95%

confidence intervals (CI) of the indirect effects. According to Preacher and Hayes (2008), mediation occurs when both the upper and lower levels of CI values are either positive or negative; thus, not containing a zero. Likewise, full mediation occurs when the total and indirect effects are significant but the direct effects are not significant. Partial mediation occurs when total, direct, and indirect effects are significant (Preacher & Hayes, 2004). Table 2 illustrates the total, indirect, and direct effects obtained for the nine mediation models tested in research hypothesis five – seven.

The fifth research hypothesis (RH₅) asserts that psychological meaningfulness will mediate the relationship between its determinants (i.e. job enrichment, work role fit, and co-worker relations) and work engagement. The results of the mediation analysis indicate that meaningfulness fully mediates job enrichment on engagement ($\beta = .075$, CI = .029 to .139). In addition, the results show the direct effect of job enrichment on engagement became non-significant for meaningfulness ($\beta = .069$, $p > .05$). Likewise, meaningfulness fully mediates work role fit on engagement ($\beta = .110$, CI = .057 to .177) and the direct effect of work role fit on engagement became non-significant for meaningfulness ($\beta = .058$, $p > .05$). In contrast, meaningfulness did not mediate the relationship between co-worker relations and engagement ($\beta = .004$, CI = -.057 to .059) nor were the total and direct relationships between co-worker relations and engagement significant ($\beta = -.058$, $p > .05$ and $\beta = -.054$, $p > .05$, respectively).

The sixth research hypothesis (RH₆) asserts that psychological safety will mediate the relationship between its determinants (i.e. co-worker relations, supervisor relations, and co-worker norms) and work engagement. The results of the mediation analysis indicate that safety did not mediate the relationship between co-worker relations and

engagement, ($\beta = -.008$, CI = $-.034$ to $.008$), supervisor relations and engagement, ($\beta = -.008$, CI = $-.031$ to $.009$), or co-worker norms ($\beta = .006$, CI = $-.007$ to $.027$). Likewise, the total and direct relationship between co-worker relations and engagement ($\beta = -.058$, $p > .05$ and $\beta = -.054$, $p > .05$, respectively), supportive supervisor relations and engagement ($\beta = -.001$, $p > .05$ and $\beta = -.007$, $p > .05$, respectively) and co-worker norms and engagement ($\beta = -.059$, $p > .05$ and $\beta = -.065$, $p > .05$, respectively) were not significant.

The seventh research hypothesis (RH₇) asserts that psychological availability will mediate the relationship between its determinants (i.e. resources, self-consciousness, and outside activities) and engagement at work. The results of the mediation analysis indicate that availability did not mediate the relationship between self-consciousness and engagement, ($\beta = -.016$, CI = $-.057$ to $.007$) or outside activities and engagement ($\beta = .003$, CI = $-.021$ to $.034$). Although the confidence intervals (CI) suggest that availability mediates the relationship between resources and engagement ($\beta = .027$, CI = $.004$ to $.067$), the total and direct relationship between resources and engagement ($\beta = -.012$, $p > .05$ and $\beta = -.039$, $p > .05$, respectively) are not significant. Thus, there is no mediation, rather a significant indirect effect. Lastly, the total and direct relationship between self-consciousness and engagement ($\beta = -.002$, $p > .05$ and $\beta = -.014$, $p > .05$, respectively), and outside activities and engagement ($\beta = .025$, $p > .05$ and $\beta = .022$, $p > .05$ respectively) were not significant.

Table 2

Mediation: Total, Indirect, and Direct Effects with Engagement

Relationship	Total	Indirect	Direct
Job Enrichment-Meaningfulness	.143*	.075*	.069
Work Role Fit-Meaningfulness	.168*	.110*	.058
Coworker Relations-Meaningfulness	-.058	.004	-.054
Coworker Relations-Safety	-.058	-.008	-.054
Supportive Supervisor Relations-Safety	-0.001	-.008	.007
Coworker Norms-Safety	-.059	.006	-.065
Self-consciousness-Availability	-.002	-.016	.014
Resources-Availability	-.012	.027*	-.039
Outside Activities-Availability	.025	.003	.022

Summary

The results of this study provide partial support of the researcher's hypotheses regarding blue-collar employees, specifically individuals classified as maintenance, grounds, and custodial workers employed at one of the 15 Mississippi community colleges. As such, both job enrichment and work role fit are significantly related to meaningfulness. All three factors, co-worker relations, supervisor relations, and co-worker norms are significantly related to safety, and resources is significantly related to availability. Likewise, meaningfulness and availability were significantly related to engagement. Of the nine mediation analyses, the researcher found only two fully mediated relationships. Meaningfulness mediated the relationship between job enrichment and engagement as well as work role fit and engagement.

Research suggests that blue-collar workers are consistently less engaged than other occupational groups; however, studies focusing on this sector of employees are limited (Schaufeli, Bakker, & Salanova, 2006). Because this study is grounded in theory (Kahn, 1990), results of this study may add to the knowledge base of engagement and blue-collar employees; specifically, maintenance, grounds, and custodians in a community college setting.

CHAPTER V – SUMMARY

Overview

The present study examined the psychological conditions of engagement among community college maintenance employees. Specifically, the researcher explored the relationships between employee engagement and the factors that may influence the three psychological conditions of engagement (meaningfulness, safety, and availability) for individuals currently employed in the maintenance department at one of the 15 community colleges in Mississippi.

The survey administered to the participants was developed by May et al. (2004) and derived from Kahn's (1990) qualitative research related to engagement and the psychological conditions that may influence engagement. May et al. (2004) developed the survey instrument which consists of 12 scales and 81 items (Appendix A) to provide a quantifiable method of examining engagement as theorized by Kahn (1990). May et al.'s (2004) survey instrument has been used within several engagement studies (Chikoko, Buitendach & Kanengoni, 2014; Olivier & Rothmann, 2007; Rothmann & Rothmann, 2010; van Zyl, Deacon, & Rothmann, 2010); however, none of the studies focused on maintenance employees, the sector of employees specified for this study.

This chapter presents a discussion, findings, interpretations, limitations, implications, recommendation for future research, and concluding thoughts.

Discussion

This study is considered non-experimental and utilized a cross-sectional design (Leedy & Ormod, 2010). Using quantitative analysis, data were analyzed and the results were reported in Chapter IV. These results are further discussed in this chapter.

Demographics and Data Collection

The aim of this study was to survey employees at Mississippi's 15 community colleges who are responsible for maintaining the buildings and grounds. This sector of employees is classified as blue-collar workers and consists of either skilled craftsmen (e.g. electricians, plumbers), grounds employees (e.g. using mowers, power washers, weed eaters), or building custodians (National Compensation Survey, 2009). Likewise, all survey participants were employed directly with their respective college rather than with an out-sourced vendor. No other demographics were obtained from the participants.

The researcher used Qualtrics Survey Software, a web-based questionnaire, and conducted the survey on-site at each of the 15 community colleges. A total of 452 participants completed the survey.

Overview of the Problem

In the past two decades, research related to employee engagement has gained significant traction as many organizations have moved from stable work environments to experiencing continuous change (Schaufeli, 2013). The shift has resulted in organizations requiring more than an employee's physical resources. Rather, organizations are expecting employees to invest their psychological capabilities to meet the demands of their respective organizations (Schaufeli, 2013). Likewise, research suggesting lower turnover rates, positive work performance and increased productivity has organizations recognizing the importance of employee engagement (Bates, 2004; Baumruk, 2004; Buhler, 2006; Harter, Schmidt, & Hayes, 2002).

This study is situated in Kahn's (1990) theory related to employee engagement whereas Kahn asserts that the psychological conditions of meaningfulness, safety, and availability are central to understanding why an employee chooses to engage at work. May, et al. (2004) operationalized Kahn's (1990) qualitative study and developed a quantitative method to examine the relationship between employee engagement and the factors that may influence the three psychological conditions of engagement. May et al.'s (2004) study focused on white-collar employees with a suggestion that subsequent research is necessary "to explore whether the relations we found in the study generalize to other organizational settings as the determinants of the psychological conditions may vary in their importance in the model" (p. 32). Although several studies have utilized May et al.'s instrument, (Chikoko, et al., 2014; Olivier & Rothmann, 2007; van Zyl, Deacon, & Rothmann, 2010), blue-collar workers have received little focus despite research suggesting that blue-collar workers, in business and industry, are consistently less engaged than other occupational groups such as educators, managers, and police officers (Schaufeli, Bakker & Salanova, 2006).

The focus of this study is on community college maintenance employees and engagement. While some studies exist related to employee engagement and administrators, faculty, and staff of community colleges, no studies can be found in the literature linking employee engagement and campus maintenance personnel, the employees who are directly responsible for ensuring campuses are properly maintained and aesthetically pleasing. Nevertheless, studies suggest that a relationship may exist between the overall appearance of a community college campus and a student's decision to enroll and/or remain enrolled at a campus (Absher & Crawford, 1996; Campbell &

Bigger, 2008; Noel-Lewitz, 2011; Smith, 2005). Because work performed by this sector of employees may impact enrollment and community college administrators are seeking ways to maintain a competitive advantage in this challenging economic environment, the researcher sought to examine the factors that may influence employee engagement of community college maintenance employees.

Findings and Interpretation

This study examined the relationship between engagement and the factors that may influence the psychological conditions of engagement: meaningfulness, safety, and availability. The factors examined for meaningfulness were job enrichment, work role fit, and co-worker relations. The factors examined for safety include supportive supervisor relations, co-worker relations, and adherence to co-worker norms; and the factors examined for availability were resources, self-consciousness, and outside activities. Further, the researcher explored whether each of the psychological conditions mediated the relationship between its specified factors and engagement.

Research/hypothesis One

The findings of this research study indicate that job enrichment and work role fit are positively related to meaningfulness. This aligns with previous research suggesting that an employee will experience meaningfulness when the work role complements one's self-concept and provides an opportunity for self-expression (May et al, 2004; Snyder & Lopez, 2005). Likewise, job enrichment has been linked to employee empowerment and personal growth, which contributes to a feeling of meaningfulness in one's job (Janik & Rothmann, 2015; Spreitzer, 1995). Despite the assertion that employees who have rewarding co-worker interactions should experience increased meaningfulness at work

(Kahn, 1990; Locke & Taylor, 1990), this study did not find a relationship between co-worker relations and meaningfulness. A study by Janik & Rothmann (2015) obtained similar results as this study and suggests that the tasks performed and the actual work role may contribute more to a meaningful work experience than the relationship between employees.

Research/hypothesis Two

The findings of this research study indicate that supportive supervisor relations and rewarding co-worker relations were positively related to psychological safety and adherence to co-worker norms were negatively related to psychological safety. This aligns with May et al.'s (2004) results and supports Kahn's (1990) notion that employees are more likely to experience psychological safety when they sense that their supervisors and co-workers are trustworthy and show support.

Research/hypothesis Three

The findings of this research study indicate only resources were positively related to psychological availability. Rothmann and Rothmann (2010) found similar results, suggesting that when emotional, cognitive, and physical resources are present, an employee is more likely to be psychologically available at work. No relationship was found between availability and the factors of self-consciousness and outside activities.

Research/hypothesis Four

The research/hypothesis was grounded in Kahn's (1990) original theory which posits that an employee will determine whether to engage after subconsciously considering "(1) How meaningful is it for me to bring myself into this performance? (2) How safe is it to do so? and (3) How available am I to do so?" (p. 703). The findings of

this research study indicate that meaningfulness and availability were positively related to engagement; however, no relationship was found between safety and engagement. Previous studies also found significant relationships between meaningfulness and engagement and suggest that when an employee experiences psychological meaningfulness at work, engagement should occur, resulting in positive outcomes for the organization (May et al., 2004; Olivier & Rothmann, 2007; Rothmann & Baumann, 2014). Likewise, research related to psychological availability and engagement align with the researcher's findings (Olivier & Roth, 2007; Rothmann & Baumann 2014; Rothman & Rothmann; 2010) and is supported by the notion that employees have many life situations that compete with the ability to be emotionally and psychologically present at work. However, when an employee has the necessary resources and feels confident, the employee may experience psychological availability and is likely to be actively engaged at work (Rothmann & Rothmann, 2010).

Research/hypothesis Five

The findings of this research indicate meaningfulness fully mediates the relationship between engagement and both job enrichment and work role fit. However, meaningfulness did not mediate the relationship between co-worker relations and engagement. These findings align with the results of May et al.'s (2004) study. Further, the findings support previous research, which suggests that characteristics such as skill variety, autonomy, and task identity (job enrichment) coupled with a perceived fit between one's self-concept and work role (work role fit) will influence meaningfulness and lead to work engagement (Chikoko, Buitendach, & Kanengoni, 2014).

Research/hypothesis Six

The findings of this research indicate that safety does not mediate the relationship between co-worker relations, supervisor relations, or co-worker norms, and work engagement. May et al. (2004) found that safety partially mediated the relationship between co-worker norms and engagement. However, the results of this study are in line with previous research by Olivier and Rothmann (2007). Further, in RH₂, the researcher found significant relationships between the proposed determinants of safety (co-worker relations, supervisor relations, and co-worker norms) and safety. However, in RH₄, no relationship was found between safety and work engagement. Because there was not a significant relationship between safety and work engagement prior to testing for mediation, the likelihood that safety would mediate the relationship between the independent variables (co-worker relations, supervisor relations, and co-worker norms) and the dependent variable (engagement) was doubtful.

Research/hypothesis Seven

The findings of this research indicate that availability does not mediate the relationship between resources, self-consciousness, or outside activities and work engagement. Previous studies support the researcher's findings (Chikoko, Buitendach, & Kanengoni, 2014; May et al., 2004; Olivier & Rothmann, 2007; Rothmann & Rothmann, 2010). Self-efficacy was not a proposed determinant of availability in this study. However, a study by Jacobs (2013) found that availability mediated the relationship between self-efficacy and engagement and suggested that "if one has higher levels of self-efficacy, or more confidence and faith in their abilities, they will be more psychologically available to in turn become engaged in their work" (p. 178). As such,

future research related to the relationship of one's availability to work engagement should consider including self-efficacy as a potential determinant of availability.

The purpose of the study was to explore the relationship between employee engagement and the factors that may influence the three psychological conditions of engagement: meaningfulness, safety, availability. As it relates to the sector of employees in this study, the psychological condition of meaningfulness appears to have the greatest number of relationships to engagement such that job enrichment and work role fit are related to meaningfulness and meaningfulness mediates the relationship between its' determinants and engagement. This finding related to meaningfulness aligns with previous studies (May et al., 2004; Olivier & Rothmann, 2007; Rothmann & Rothmann; 2010). In contrast, the determinants of safety (coworker relations, supervisor relations and coworker norms) were related to safety but safety did not have a relationship to engagement nor did it mediate the relationship between its determinants and engagement. Lastly, availability was related to engagement but only resources was related to availability. Likewise, availability did not mediate the relationship between its determinants and engagement.

Implications

Research suggests that campus appearance is a factor in a student's decision to enroll at a community college. Likewise, community colleges are relying heavily on student paid tuition due to budget cuts. In FY14, state funding for Mississippi's community colleges had decreased to 40.9% of total revenues from 55.8% in FY00 (Mississippi Community College Board, 2014). During the same time period, the average cost of student tuition and fees at the 15 Mississippi community colleges more than

doubled (S. Ford, personal communication, July 31, 2013). To make matters worse, Mississippi community colleges have received four budget cuts for FY17 and anticipate a system-wide budget cut of \$28 million for FY18 (Gates & Harris, 2017). As a result, the community colleges are considering another increase in tuition and fees in order to balance the budget.

Because maintenance, grounds, and custodians are the sector of employees who maintain the physical appearance of the campus on a daily basis, community college administrators should understand the significance of employee engagement. Findings from this study could inform community college presidents and administrators that employees who are engaged at work are more likely to exceed expectations in their work role, have a desire to help co-workers, and positively impact the organization as a whole. During a time of significant budget cuts in the community college system and a need to both recruit and retain students, having employees who are engaged and dedicated to their work is paramount.

Community college administrators, specifically, superintendents, physical plant directors, and direct supervisors for this sector of employees, may use the findings of this research study to guide in hiring employees who not only perform the duties assigned but whose self-concept fits the work role. This study along with a number of previous studies found meaningfulness to be significantly related to work engagement. As such, community college administrators should consider ways to enhance an employee's experience of meaningfulness at work. Suggestions include examining whether employees are consistently treated with respect and dignity, and whether they are praised for their contributions. Further, community college administrators should take time to

understand the personal aspirations of employees and encourage self-expression, which may help to ensure a proper fit to the work role. Likewise, administrators should provide feedback and encourage ownership in one's job. In doing so, an employee may find an elevated level of meaningfulness in his or her work, leading to a sense of engagement and attribute to employee retention.

Community college administrators could use the findings of this study to steer employee development topics for current employees. For example, administrators could hold employee development sessions that allow this sector of employees to provide their insight on how to recruit and retain students. Open dialogue on a topic that is the overarching goal of all community colleges, could help employees feel that their opinions are valued and foster a sense of meaningfulness at work. Suggestions and ideas uncovered at the initial session could lead to subsequent employee development sessions that provide training and offer an open forum for employee feedback. By giving employees a platform to learn and feel worthwhile, employees may further invest themselves in their respective work roles and become more engaged.

Limitations and Recommendations for Future Research

There are several limitations to this study that also contribute to recommendations for future research. Although grounded in theory, the use of a self-report survey instrument to conduct the cross-sectional study prohibited the researcher from drawing causal inferences. The survey instrument was developed by May et al. (2004) and consisted of 81 items. For the participants in this study, considered blue-collar workers, the length of the survey was problematic. The researcher conducted the survey face to face at each of the 15 community colleges and was able to witness first hand some of the

frustrations experienced with the length of the survey. Some participants chose to quit the survey prior to finishing due to the length. Likewise, some employees struggled with using the computer's mouse. At one particular institution, the researcher was informed that several employees would not participate because they could not read fluently. Future research involving this sector of employees should involve a shorter survey, or the researcher should consider conducting a qualitative study. A qualitative survey would be ideal as the participants were very candid and enjoyed talking about their jobs. A common theme among all participants surveyed was an appreciation that their opinions were being sought. At least one participant at each college wanted assurance that the results would be sent to their supervisors. Although these informal discussions with participants were not part of this study, the idea that participants felt inclined to speak freely and wanted the results shared with supervision may support the researcher's finding that a significant relationship exists between supervisor relations and psychological safety.

The researcher chose to compile data for all maintenance, grounds, and custodians at the 15 community colleges as a single group rather than consider the results based on job descriptions, gender, age, length of employment, or the specific community college. Future research should consider examining maintenance, grounds, and custodians as three distinct groups. Although the three groups typically work in the same department, each group usually has some unique qualities and the employees within each group perform work that is different than the other groups. For example, maintenance employees normally handle skilled craft responsibilities both inside and outside of the buildings, custodians generally maintain the interior of the buildings, and the grounds employees

handle all external work. Also, research is needed to determine if the relations found in this study would differ if gender, age, length of employment, or analyzing each community college separately were considered. A study by Hermsen (2008) pertaining to white-collar staff members in a university setting found that length of employment is negatively related to employee engagement. This finding suggests that the longer an employee works for the college, the less engaged the employee may become. Hermsen (2008) found a link between morale and engagement. Future research should consider studying the relationship of employee morale and engagement with the sector of employees identified in this study.

The researcher's measure of psychological safety resulted in a reliability of .534, after removing one of the three statements in the scale. Although the alpha was not low enough to necessitate discarding psychological safety from the research model, the researcher did not find a significant relationship between safety and engagement; nor did safety mediate the relationship between the determinants and engagement. Likewise, previous studies (Olivier & Rothmann, 2007; Rothmann & Rothmann, 2010) obtained alphas lower than the guideline of .70 (Nunnally & Bernstein, 1994) and found results similar to the researcher's when testing for significance. The use of only three items in the psychological safety scale with two of the three items requiring reverse-coding may be the reason for a less than reliable scale. Additional research should be conducted to better develop a psychological safety scale for future studies.

Future research should also consider conducting this study with maintenance, grounds, and custodians employed by state universities to determine if the results of this study generalize to this sector of employees in the university system. Because universities

are vying for the same students as the community colleges, maintaining an aesthetically pleasing campus is equally important to universities for both recruiting and retaining students.

Finally, the findings of this study were limited in that the researcher could find no prior studies associated with the psychological conditions of engagement and maintenance, grounds, and custodians in a higher education setting. In fact, only one study could be found that focused on higher education employees and the psychological conditions of engagement (Chikoko, Buitendach & Kanengoni, 2014). However, the participants for the study consisted primarily of administrative personnel. Likewise, another study involving the psychological conditions of engagement included blue-collar workers but the employment setting was the oil industry (Rothmann & Rothmann, 2010).

Due to the lack of relevant research focusing on the relationship between engagement and maintenance, grounds, and custodians in a community college setting, the researcher could not make direct comparisons from the results of this study to other studies. While considered a limitation for the researcher, the gap in the literature related to this sector of employees and the variables examined was the foundation for the researcher's study. Furthermore, the results of this study provide a starting point for future research related to this sector of employees and the psychological conditions of engagement.

Conclusion

This study sought to determine whether the relationships found in previous engagement studies generalize to blue-college workers, specifically community college maintenance, grounds, and custodial employees. The results contributed statistical data

about the relationship between the psychological conditions of meaningfulness, safety, and availability and engagement in an under-represented class of employees. The results should inform community college administrators about the significance of engagement within their maintenance, grounds, and custodial crews. Likewise, community college administrators should be familiar with the psychological conditions of engagement, specifically meaningfulness, and recognize how engaged maintenance employees benefit their colleges. As community colleges continue to face financial challenges, the findings of this study support the significance of engaged maintenance, grounds, and custodians as the work they perform may affect the bottom line through both student recruitment and retention.

APPENDIX A – Employee Engagement Scale

Engagement

Cognitive

1. Performing my job is so absorbing that I forget about everything else.
2. I often think about other things when performing my job. (r)
3. I am rarely distracted when performing my job.
4. Time passes quickly when I perform my job.

Emotional

5. I really put my heart into my job.
6. I get excited when I perform well on my job.
7. I often feel emotionally detached from my job. (r)
8. My own feelings are affected by how well I perform my job.

Physical

9. I exert a lot of energy performing my job.
10. I stay until the job is done.
11. I avoid working overtime whenever possible. (r)
12. I take work home to do.
13. I avoid working too hard. (r)

Meaningfulness

14. The work I do on this job is very important to me.
15. My job activities are personally meaningful to me.
16. The work I do on this job is worthwhile.
17. My job activities are significant to me.

18. The work I do on this job is meaningful to me.

19. I feel that the work I do on my job is valuable.

Psychological Safety

20. I'm not afraid to be myself at work.

21. I am afraid to express my opinions at work. (r)

22. There is a threatening environment at work. (r)

Psychological Availability

23. I am confident in my ability to handle competing demands at work.

24. I am confident in my ability to deal with problems that come up at work.

25. I am confident in my ability to think clearly at work.

26. I am confident in my ability to display the appropriate emotions at work.

27. I am confident that I can handle the physical demands at work.

Job Enrichment

Skill Variety

28. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

29. The job requires me to use a number of complex or high-level skills.

30. The job is quite simple and repetitive. (r)

Task Identity

31. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious

beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

32. The job provides me the chance to completely finish the pieces of work I begin.

33. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end. (r)

Task Significance

34. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

35. This job is one where a lot of other people can be affected by how well the work gets done.

36. The job itself is not very significant or important in the broader scheme of things. (r)

Autonomy

37. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

38. The job gives me considerable opportunity for independence and freedom in how I do the work.

39. The job denies me any chance to use my personal initiative or judgment in carrying out the work. (r)

Feedback

40. To what extent does *doing the job itself* provide you with information about your work performance? That is, does the actual work *itself* provide clues

about how well you are doing – aside from any “feedback” co-workers or supervisors may provide?

41. Just doing the work required by the job provides many chances for me to figure out how well I am doing.

42. The job itself provides very few clues about whether or not I am performing well. (r)

Work Role Fit

43. My job ‘fits’ how I see myself.

44. I like the identity my job gives me.

45. The work I do on this job helps me satisfy who I am.

46. My job ‘fits’ how I see myself in the future.

Rewarding Co-worker Relations

47. My interactions with my co-workers are rewarding.

48. My co-workers value my input.

49. My co-workers listen to what I have to say.

50. My co-workers really know who I am.

51. I believe that my co-workers appreciate who I am.

52. I sense a real connection with my co-workers.

53. My co-workers and I have mutual respect for one another.

54. I feel a real ‘kinship’ with my co-workers.

55. I feel worthwhile when I am around my co-workers.

56. I trust my co-workers.

Supportive Supervisor Relations

- 57. My supervisor helps me solve work-related problems.
- 58. My supervisor encourages me to develop new skills
- 59. My supervisor keeps informed about how employees think and feel about things.
- 60. My supervisor encourages employees to participate in important decisions.
- 61. My supervisor praises good work.
- 62. My supervisor encourages employees to speak up when they disagree with a decision.
- 63. Employees are treated fairly by my supervisor.
- 64. My supervisor is committed to protecting my interests.
- 65. My supervisor does what he/she says he/she will do.
- 66. I trust my supervisor.

Co-worker Norm Adherence

- 67. I go along with the norms in my group of co-workers.
- 68. I don't 'rock the boat' with my co-workers.
- 69. I do what is expected of me by my co-workers.

Resources

- 70. I feel mentally sharp at the end of the workday.
- 71. I can't think straight by the end of the workday. (r)
- 72. I feel overwhelmed by the things going on at work. (r)
- 73. I feel emotionally healthy at the end of the workday.
- 74. I feel like I'm at the end of my rope emotionally. (r)

75. I feel emotionally drained from my work. (r)

76. I feel tired before my workday is over. (r)

77. I feel physically used up at the end of the workday. (r)

Self-consciousness

78. I worry about how others perceive me at work.

79. I am afraid my failings will be noticed by others.

80. I don't worry about being judged by others at work. (r)

Outside Activities

81. How many hours per week do you participate in organizations other than your college (i.e. other jobs, church, school, girl scouts, volunteering, etc.)?

1 = 1-5 hours

2 = 6-10 hours

3 = 11-15 hours

4 = 16-20 hours

5 = 21 + hours

Note: (r) indicates items that are reversed scored

APPENDIX B – IRB Approval Letter



INSTITUTIONAL REVIEW BOARD
118 College Drive #5147 | Hattiesburg, MS 39406-0001
Phone: 601.266.5997 | Fax: 601.266.4377 | www.usm.edu/research/institutional.review.board

NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 16020504
PROJECT TITLE: Psychological Conditions of Engagement Among Community College Maintenance Employees: A Cross-Sectional Study
PROJECT TYPE: New Project
RESEARCHER(S): Tammy Franks
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Educational Studies and Research
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 02/09/2016 to 02/08/2017
Lawrence A. Hosman, Ph.D.
Institutional Review Board

APPENDIX C – Permission to Use Instrument

Franks, Tammy

From: May, Douglas R <drmay@ku.edu>
Sent: Monday, April 28, 2014 4:49 PM
To: Franks, Tammy
Subject: RE: regarding your employee engagement survey instrument

Tammy,

Feel free to use the instrument. Good luck with your research!

Douglas

.....
Douglas R. May
Professor and Director
International Center for Ethics in Business
University of Kansas
Lawrence, KS 66045-7585
drmay@ku.edu / 785-864-7520

From: Franks, Tammy [tammy.franks@mngccc.edu]
Sent: Monday, April 28, 2014 4:14 PM
To: May, Douglas R
Subject: regarding your employee engagement survey instrument

Dr. May,

My name is Tammy Franks and I am currently working on my Ph.D. in Higher Education Administration at the University of Southern Mississippi. My topic of interest for my dissertation is employee engagement and my participants for the study are community college maintenance personnel. Throughout my research on engagement, I continue to gravitate back to the three psychological conditions as defined by Kahn (1990). Needless to say, my research led me to your study, "The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work."

In your "Strengths and limitations" section, you mentioned that your study was limited to a single group of administrative employees in an insurance firm and that a need exists to, "explore whether the relations we found in the study generalize to other organizational settings as the determinants of the psychological conditions may vary in their importance in the model." I believe that the use of your survey within the context of higher education while focusing on the underserved group of employees who are considered, "blue collar" workers, may prove useful in the study of employee engagement.

Would you be willing to give me permission to use your instrument for my study? I am more than willing to discuss my study in more detail if you would like.

Thank you in advance for your consideration.

Tammy Franks

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