ANALYZING THE CONNECTION BETWEEN WORK ENGAGEMENT FACTORS AND CREATIVITY

By

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Nnenna S. Onwe 05/09/2019

I dedicate this research to the most important people in my life: my father, mother and little brother.

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ABSTRACT

Employee engagement is associated with many benefits such as performance, motivation, creativity, and accomplishing business goals. The aim of this study was to examine the effect physical work environment (PWE), perceived organizational support (POS), and employee well-being has on engagement to generate creativity. Innovation has been a key contributor to the economic growth in the U.S.A. and there would not be innovation without creativity, which is the basis of innovation. A survey was conducted on 99 randomly selected participants that were 18 years and older with at least three months of work experience. The data revealed creativity did not relate to any other factor. However, engagement positively correlated with POS, PWE, and employee well-being. The most remarkable finding of this study was discovering a significant relationship between PWE and engagement despite a lack of research that supports this relationship. The results were discussed in detail and future considerations, limitations, and practical implications were also explored.

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CHAPTER I: INTRODUCTION

In recent years, employee engagement has been a major point of discussion for leadership in various organizations (Chandani, Mehta, Mall, & Khokhar, 2016). The popularity of employee engagement has been attributed to its positive relationship with an increase in productivity and organizational success (Bindu, 2012). Research has sought to expand on the link between engagement and various organizational outcomes such as having a positive connection to work, the responsibility to accomplish business goals, motivation, performance, and creativity (Anitha, 2014; Chen, 2016). Creativity stands out as a notable outcome of engagement for this study because it is believed to be a driver for "organizational success and innovation" (Derecskei, Nagy, & Paprika, 2017, p.3). Besides developing organizational success and innovation, creativity is linked to an organization's competitiveness in the global market (George, 2007; Zhang & Bartol, 2010).

Researchers have found success with the implementation of creative strategies to promote employee engagement. In Song, Lim, Kang, and Kim's (2014) study on the relationship between collaborative organizational learning and employee engagement, they found that the combination of a supportive organizational climate and employee engagement facilitates creative decision making. This was a significant finding to the business community since creativity has a major influence on the dynamic work process. Balbone and Bortoluzzi's (2015) research noted that a business' success is connected to its adaptability. Companies like Google and Amazon must constantly adapt or change their business model to meet the demands of their clients (Demil & Lecocq, 2010; Velu, 2017). Since change is an inevitable and necessary part of organizational success,

businesses need to encourage employees to present creative solutions; for example, implementing transformative learning techniques to influence an employee's ability to adapt to organizational changes and work-related issues (Song et al., 2014). This knowledge should encourage more organizations to access the full potential of engaged and creative employees. An addition of current studies could persuade more organizations, especially smaller companies with fewer resources, to feel confident about allocating funds towards the advancement of employee engagement.

Rai's (2016) research suggests engaged employees strive to outperform and take the opportunity to improve their skills and potential. To further build on Rai's findings, Kataria, Rastogi, & Garg (2013) believe that developing an organizational initiative that emphasizes the importance of engagement results in a work environment that encourages employees to feel more connected to the work process and driven to deliver strong performances. Engaged employees are also passionate about achieving organizational goals in contrast to disengaged employees that lack the energy and passion to accomplish desirable work outcomes (Chandani et al., 2016). Consequently, organizations that overlook the detrimental effects of disengaged employees and the benefits of employee engagement could undermine their company's opportunity to achieve organizational success.

Engagement research would benefit from more studies that explore the relationship between employee engagement and creativity by utilizing the following factors: perceived organizational support (POS), physical work environment (PWE), and employee well-being. An understanding of these factors, especially PWE, which is often overlooked in favor of the psychosocial or non-physical aspect of the work environment,

could encourage organizations to create a workplace that is more engaging and stimulates creativity. It is important for this study to examine the relationships between PWE and engagement while reinforcing the findings on the connection POS and well-being share with engagement and creativity. This study is focused on understanding if a combination of these factors serves as conditions of engagement to promote creativity. In the pursuit of improving organizational success, it is valuable to highlight the significant effects engagement has on creativity.

CHAPTER II: LITERATURE REVIEW

Employee Engagement

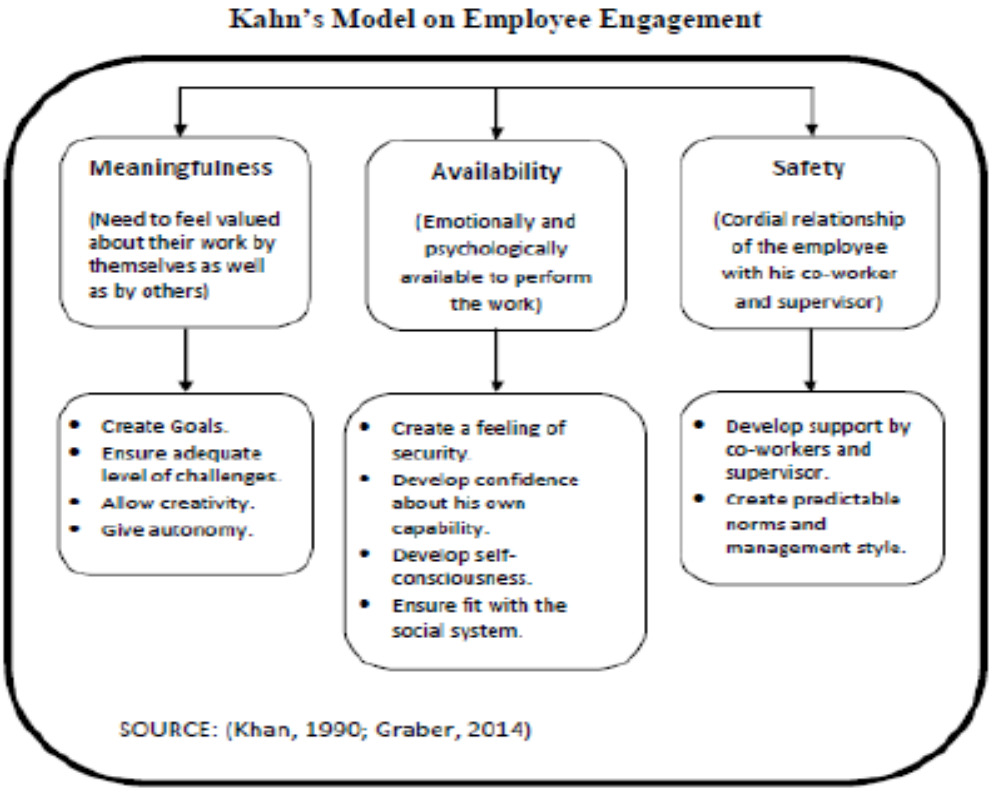
Organizations consider employee engagement as the "leading source of competitive benefits" such as increased productivity, decreased turnover, and producing employees that perform beyond the company's minimum requirements (Rai, 2016, p.2). According to Kular, Gratenby, Rees, Soane, and Truss (2008), high levels of employee engagement are strongly associated with positive organizational outcomes. Employee engagement is defined as the quest for understanding an employee's job or role and discovering their full potential (Cowardin-Lee & Soyalp, 2011). Tapping into an employee's full potential can help workers perform at high energy levels and focus that energy on creating positive outcomes. By examining the definition of engagement, it is understandable how effective employee engagement is in producing desirable outcomes.

However, Shuck and Wollard's (2010) review of several articles such as Kahn's (1990) and May, Gilson, and Harter's (2004) engagement studies were analyzed to develop a universal definition of employee engagement. It was decided that employee engagement should be defined as "an individual employee's cognitive, emotional, and behavioral state directed towards desired organizational outcomes" (Shuck & Wollard, 2010, p.103). Emotional engagement represents an engaged employee's feelings and behavioral engagement deals with the development of objective measures of engagement behavior. Cognitive engagement focuses on an employee's understanding of his/her job and commitment to the organization and its culture. This suggests that individuals must make a conscious decision to be engaged. Robinson, Perryman, and Hayday's (2004) findings support the effectiveness of cognitive engagement. They found that engaged

employees have a good understanding of the work process and can work well with co-workers to deliver strong performances. Furthermore, engaged employees are highly involved in performing at their potential to increase organizational outcomes (Kataria et al., 2013).

The employee engagement concept was first presented by Kahn (1990), who described engaged employees as people that "express themselves physically, cognitively, and emotionally during role performances" (p. 694). Kahn developed a model that focused on three psychological conditions of engagement, which include meaningfulness, availability, and safety (Bindu, 2012). Figure 1 illustrates the definitions and implications of Kahn's psychological conditions of engagement. Availability represents the physical, psychological, and emotional effort that is required to perform one's job (Kahn, 1990). Kahn defined safety as a person's ability to present oneself without it negatively impacting a person's career or image. Organizational support, particularly supervisor and co-worker support fall under the domain of safety (Padhi & Panda, 2015). Thus, the relationship between the organization and employee can be considered the focal point of safety. The feeling of getting a return from the physical, cognitive, or emotional energy an employee invests indicates meaningfulness (Kahn, 1990). This allows creativity to flourish and establishes adequate levels of challenge for employees (Padhi & Panda, 2015). The Kahn model laid the foundation for employee engagement research and inspired further research into the impact of employee engagement.

Figure 1: Kahn's Model of Employee Engagement (Retrieved from Padhi & Panda, 2015)



Creativity

Creativity is defined as the contribution of beneficial and novel ideas that are produced by individuals in the workplace (Amabile, Conti, Coon, Lazenby & Heron, 1996). Ideas are considered novel when they stand separately from ideas that currently exist in the company (Binneswies, Ohly, & Niessen, 2008). This should not be confused with innovation, which is the process of putting a novel idea into action (Hon & Lui, 2016). Nevertheless, creativity is important to the innovation process because it serves as the initial step for generating innovations (Lee, 2016). Innovation has been a key

contributor to economic growth in the U.S.A. (Drucker, 1985). For organizations to thrive, creativity can ensure their long-term survival and use new opportunities to improve the workplace (Oldham, 2002; Shalley, Zhou, & Oldham, 2004).

Hon and Lui (2016) sorted creativity into two categories: individual creativity and group creativity. Individual creativity is defined as the contribution of beneficial ideas, products, and procedures individuals make in a social system (Amabile, 1988). This is associated with various traits such as high energy, self-confidence, broad interests, creative self-sense, intuition, autonomy, sensitivity to problems, and independence of judgment (Barron & Harrington, 1981). Group creativity is described as the creativity developed on a team or group-level (Hon & Lui, 2016). Although group creativity is an important topic, individual creativity is the focus of this study.

Kahn's (1990) engagement model can be used to establish a relationship between creativity and engagement. Based on Kahn's psychological conditions of engagement, creativity would be categorized as meaningfulness. Meaningfulness causes employees to experience a sense of receiving a return for the physical, cognitive, or emotional energy they invested in the organization. As a result, meaningfulness stimulates creativity, gives employees a sense of autonomy (i.e., self-government and control of a person's own life), and encourages employees to take on challenging tasks (Kahn, 1990; Keller, 2016; Padhi & Panda, 2015).

Another benefit of creativity that is worth exploring is self-efficacy. By examining Yu's (2013) study on the relationship between, creative self-efficacy, creative ability, and career self-management, it is understandable that self-efficacy shares a significant relationship with creativity. Self- efficacy is defined as the belief that one has

the potential to perform tasks despite the level of difficulty and "turn them into action" (Bandura, 1986; Yu, 2013, p.184). Self-efficacy promotes the use of problem-solving skills and individuals exhibit high task performance. The most significant finding from Yu's (2013) study was a positive relationship between creative ability (i.e., creative action) and self-efficacy. On the other hand, Yang, Liu, and Gu's (2017) research on the impact servant leadership has on creativity found that servant leadership and creativity is partially mediated by self-efficacy. The authors proposed other mediating variables need to be identified to explain the mediating process between creativity and servant leadership. These findings suggest self-efficacy plays a fundamental role in the creative process.

Yu (2013) found that there is empirical evidence that supports the effects self-efficacy beliefs has on the progress of creativity. People that exhibit high levels of self-efficacy identify problematic tasks as challenges instead of intimidating tasks to avoid (Williams, & Williams, 2010). This supports the idea that self-efficacy is linked to creativity through Kahn's (1990) theory for meaningfulness (i.e., creativity and motivating employees to take on challenging tasks). The parallels between the definition of self-efficacy, Williams and Williams' finding, and the outcomes of meaningfulness suggests a correlation between self-efficacy and creativity (Kahn, 1990; Padhi & Panda, 2015). Examining self-efficacy revealed that it is necessary for employees to have an awareness of their capability to embark on the creative path in order to take creative action to engage in challenging tasks.

Creativity

According to Uçar and Ötken (2013), Blau's (1964) social exchange theory described POS as the outcome of organizations rewarding employees for their effort, which results in providing aid to enhance employee performance and improve the work environment. Supervisors act as representatives of the organization and allow employees to experience support from the organization (Rothmann & Welsh, 2013). An examination of POS-related literature directed this research to Eisenberger's contributions to POS. Eisenberger, Huntington, Hutchison, and Sowa (1986) determined that the definition of POS is an employee's perception that his/her organization is a supportive company that cares about his/her well-being. The definition of POS was mentioned in many POS studies, of which include Caesens, Stinglhamber, and Luypaert's (2014) study on the effect work engagement and workaholism has on well-being and Matthews, Mills, Trout, and English's (2014) research on family-supportive supervisors, work engagement, and wellbeing. This suggests that Eisenberger et al.'s definition is generally utilized to describe POS.

Baran, Shanock, and Miller (2011) believe POS is associated with a company's commitment to its employees, which promotes feelings of organizational support. Organizational commitment or support can be expressed in various ways such as supervisor support, opportunities to grow (e.g., resources-training programs), and coworker support (Tekleab & Chiaburu, 2011). Aube, Rousseau, and Morin (2007) also found that organizational support encourages employee commitment. In this study, POS encompassed the overall support received from the entire organization.

POS creates an interdependent relationship between the organization and employees. This occurs when companies treat their employees well and, in turn, employees feel a sense of duty to deliver good work (Shore & Shore, 1995). The connection between organizational support and Kahn's (1990) model of engagement suggests two of Kahn's psychological conditions, safety and availability, apply to POS. These conditions represent the relationship between the organization and employees and the emotional effort to carry out one's job respectively (Padhi & Panda, 2015). The definition of POS is the theoretical support for POS's relationship with safety. This is due to safety and POS's shared function in the relationship between employees and the organization. Availability (i.e., the emotional effort to carry out one's job) is supported by Aube et al. (2007) and Shore and Shore's (1995) findings that employees are committed to performing their responsibilities. Considering POS's association with receiving organizational support, a commitment to perform tasks, and the concepts of safety and availability suggests POS and engagement share a significant relationship with each other.

Binnewies, Ohly, and Niessen (2008) believe that organizational support (i.e., co-worker and supervisor support) plays an important role in providing employees with a work environment that is conducive to the creative process. Isaksen & Lauer (2001) discovered POS and a positive work environment share a significant relationship with creativity. They noted this relationship can be seen in employees that demonstrate creative behavior. POS has been influential in other studies such as creative process engagement. Du, Zhang, and Chen (2016) mentioned that creative process engagement or engagement in the creative process has a positive relationship with in-role performance

provided the organization and employees support each other. In other words, the organization and employees must be willing participants in the exchange of support for workers to develop creative ideas that positively influence in-role performance.

Job stressors also have a significant influence on the POS-creativity relationship. This is observed in Zhang, Bu, and Wee's (2016) study that suggests POS has a positive relationship with creativity in the presence of job stressors. Stressors are broken down into two major categories, which include challenge stressors and hindrance stressors. Challenge stressors refer to opportunities (e.g., responsibility and workload) that can bring about personal achievement. Hindrance stressors describe the situations that prevent employees from reaching his/her goals (e.g., job insecurity and organizational politics) and personal development (Cavanaugh, Boswell, Roehling, & Boudreau, 2000; Zhang et al., 2016). Zhang et al. (2016) discovered that when challenge stressors are high and hindrance (or obstacles from the organization) stressors are low employees produce creative ideas.

Self-efficacy is instrumental in the process of executing job tasks with disregard to the level of difficulty. As mentioned earlier (refer to the creativity section), employees with high levels of self-efficacy can identify problematic tasks as challenges instead of intimidating tasks to avoid (Williams, & Williams, 2010). It can be surmised that in the presence of POS, creativity, and self-efficacy employees embrace challenging stressors or workload. Eisenberger et al.'s (1986) definition of POS (i.e., the self-perception of well-being and organizational support) and Shore and Shore's (1995) observation of employees experiencing a sense of duty to deliver good work supports Zhang et al.'s findings. This suggests that challenge stressors should not be detrimental to an

employee's well-being due to challenge stressors giving employees the opportunity to take on more responsibilities. Furthermore, it can be determined that employees are willing to accept challenge stressors for the sake of their supportive organization, which results in employees that are dedicated to delivering good work.

It is worth mentioning that Zhang et al.'s (2016) findings further elaborates the significance of meaningfulness for the reason that this psychological condition of engagement represents the importance of challenges (Kahn, 1990). Zhang et al.'s findings not only corresponds with the perception of a challenge being positively related to creativity but also intrinsic motivation (Amabile et al., 1996). Amabile (1996) noted that creativity is produced in the presence of committed employees that exhibit higher levels of intrinsic motivation. Likewise, motivated employees are more likely to take on more duties and responsibilities (Mearns & Reader, 2008). From the literature, it can be presumed that positive POS is a domino effect for generating beneficial organizational outcomes.

Employee Well-Being

It is not difficult to understand why there has been an increase in employee well-being studies (Meyer & Maltin, 2010). Researchers have been flocking to this concept for its significant association with positive job performances and high levels of productivity (Pawar, 2016). Well-being is essential for promoting thought-provoking, rewarding, exhilarating, and pleasant work environments (Bakke, 2005). These outcomes are beneficial to the sustainability of the workplace. Employee well-being is described as a self-rated concept that pertains to occupational issues, which affects an employee's psychological and/or physical comfort (Le, Zheng, & Fujimoto, 2016).

Although there are various definitions of well-being, there seems to be a consensus on the conceptual foundation of employee well-being. Cartwright and Cooper (2014) believe employee well-being is a subjective idea that occurs through "pleasant emotions as in self-evaluated happiness, through engaging in interesting and fulfilling activities, and generalized feelings of satisfaction with life (Langove & Ishan, 2017, p. 156)." This is connected to Ryan and Deci's (2001) explanation that well-being is a complex construct that involves functioning and the most favorable experiences. Pawar (2016) expressed that Ryan and Deci's description of well-being refers to the quality of an employee's experiences and its function. These definitions suggest a relationship due to the frequently utilized approaches of self-evaluation and the examination of pleasant experiences to understand how an employee's well-being is affected.

The significance of well-being can also be seen in Wright and Cropanzano's (2000) study on the relationship well-being and job satisfaction shares with job performance. Their findings suggest that well-being is a strong indicator of performance and positive well-being produces high levels of engagement to yield beneficial organizational outcomes. Kular et al.(2008) also found that high levels of engagement generate positive organizational outcomes. Furthermore, Cartwright and Cooper's (2014) definition of well-being backs the findings from Wright and Cropanzano's study since well-being occurs through the self-perception of happiness and the engagement in fulfilling activities.

Shuck and Reio (2014) focused on bridging the gap between Kahn's (1990) model of engagement and well-being. They discovered that high levels of engagement resulted in high levels of well-being and work climate. As explained by Brown and

Leigh's (1996) model that is based on Kahn's (1990) theory, work climate is related to an employee's understanding of his/her workplace in association with his/her self-perception of well-being. Robertson and Cooper (2010) discovered that well-being is instrumental in the development of high levels of employee engagement. In addition, they found that well-being is responsible for the enhancement of beneficial outcomes such as performance.

According to Truss, Shantz, Soane, Alfes, and Delbridge (2013), low levels of employee engagement or disengagement has a significant relationship with a diminished sense of well-being. Employees with a low sense of well-being produce poor performances (Christian, Garza, & Slaughter, 2011). Contrarily, engaged employees are workers that are motivated to achieve organizational success and improve their own sense of well-being (MacLeod & Clarke, 2009). By improving well-being, organizations can expect to see an increase in successful organizational outcomes and ensure that employees do not suffer from disengagement (Truss et al., 2013). Developing well-being could give employees the opportunity to take on more challenging work and produce stronger performances because engaged employees are able to deliver high levels of performance. Consequently, engaging in challenging work and giving strong performances motivates employees to be more creative (Chen, 2016; Padhi & Panda, 2015).

Wright & Walton (2003) found a significant relationship between well-being and creativity. In Holm's (2015) study, the connection between well-being and creativity and an alternative mindset (AMS) was the focal point of the experiment. AMS describes the pre-conscious mental processes (i.e., intuitive, associative, imaginative) and is associated

with holistic thinking. This study discovered that participants in the experimental group experienced higher levels of well-being and creativity than the control group after the mental shift into AMS or the pre-conscious mental process occurred. Another study focused on the influence self-enhancing humor has on creativity (Lee, 2015). Self-enhancing humor describes individuals that focus on treating themselves well and are not distressed by difficulties. Lee discovered that self-enhancing humor is positively connected to well-being and improves creativity. Creativity is strengthened due to self-enhancing humor's ability to reduce the anxiety associated with the consequences of a failed creative idea (Romero & Cruthirds, 2006).

It is also important to recall the discussion from the previous section (refer to the POS section) on challenge stressors. Since the definition of POS is an organization's concern for an employee's well-being and the employee's perception of organizational support, this suggests POS shares a relationship with well-being (Eisenberger et al., 1986). Thus, a person's well-being is important to the overall perception of POS. In addition, Shore and Shore (1995) found that employees have a sense of duty to perform good work. This shows that challenging work should not be harmful to a person's sense of well-being. Especially, if employees believe that organizations care about their well-being.

Physical Work Environment

Work environment is often described as a psychosocial work environment for enabling the fulfillment of an employee's goals by providing a workplace with a sense of safety (May et al., 2004). However, Carlopio (1996) created two categories for differentiating the distinct characteristics of the work environment, which include the

physical work environment (PWE) and non-PWE. The non-PWE involves well-being, emotional safety, promotions, and POS (e.g., supervision and coworkers). In contrast, PWE deals with facilities, environmental design, equipment and tools, and health and safety. Anitha (2014) believes a functional work environment is comprised of job security, food and water, a good culture, a good team, good physical surroundings, and a good boss.

Previous research articles such as Carlopio's (1996) study examined the physical or spatial elements of the work environment. However, over the course of time, there has not been a noticeable increase in PWE studies due to researchers' focus on the psychological well-being or psychosocial aspect of the work environment. For instance, May et al.'s (2004) article on the psychological conditions of availability, safety, and engagement focused on the psychosocial work environment. Another study that concentrated on the psychosocial work environment was Timms and Brough's (2013) study on the interactions between work engagement, career satisfaction, and work environment. They described the psychosocial work environment as the act of providing a sense of psychological safety in order to fulfill an employee's ambition. In Cowardin-Lee and Soyalp's (2011) article, the work environment was referred to as the setting for observing behavioral engagement. They failed to capitalize on the opportunity to explore the effect PWE has on engagement. Locating relevant literature was an obstacle for this study. The unsuccessful search for PWE and engagement literature suggests a lack of PWE and engagement specific research.

Current studies have shifted its attention to PWE, but the studies this research discovered were often associated with topics in the medical community. For example,

Bijleveld and Knufinke (2018) found that bright light exposure in the workplace diminished or suppressed the production of melatonin. This is a significant step in the right direction for performance and sleep studies, but engagement research has been left behind and can significantly benefit from more studies on the effects of PWE. On the other hand, Anitha's (2013) study analyzed the relationship between both aspects of the work environment. Though, there was more emphasis on the emotional and interpersonal dimensions of the work setting.

The role creativity plays in the physical setting is not a widely researched topic (Kallio, Kallio, & Blomberg, 2015). Lee (2016) considered that a low number or lack of PWE and creativity studies can be attributed to the trouble researchers have with connecting the quantitative and tangible structure of PWE with the intangible and qualitative characteristics of creativity. However, the disappointment of not locating relevant engagement and PWE studies was not replicated during the search for creativity and PWE studies. There has been an increase in evidence that supports the idea that the physical environment has a positive impact on creativity (Amabile et al., 1996). McCoy and Evans (2010) also mentioned that evidence supports the creativity-physical environment relationship.

Sternberg and Lubart's (1995) investment theory of creativity identified environment as one of the six most important causes of creativity with the others including motivation, personality, styles of thinking, knowledge, and intellectual abilities (Sternberg, 2006). Sternberg discovered that the investment theory of creativity allows creative people to buy low by developing unpopular ideas with the potential to grow. Initially, these ideas are met with resistance, but ultimately the idea sells high or is

embraced by the organization. From that point, the creative person moves on to the next unpopular idea and starts the process over again. The physical environment has a significant influence on creativity because a negative physical environment can inhibit the creative process (Martens, 2011). Companies that want to increase creativity and innovation must design a workspace that encourages the exchange of ideas and difference of opinion through spatial organization (Kornberger & Clegg, 2004). Csikszentmihalyi (1996) expressed people engage in creative habits in the form of making a safe and comfortable personal space or microenvironment. A symbolic environment such as the microenvironment described by Csikszentmihalyi is important for employees to execute work responsibilities (Oksanen & Ståhle, 2013). This implies that employees need a creative outlet so they can function or complete responsibilities.

According to Stein (1968), the relationship between the work environment and creativity has been described as the purpose of the transactional relationship between an employee and their surroundings. This pertains to the idea of empowering employees to take control of their workspace. Samani, Rasid, and Sofian (2015) understood that employees should be directly involved in the organization or layout of the workplace. For this reason, employees would feel more satisfied with the arrangement of their surroundings and address the problems with the work environment. Creative process engagement or engagement in the creative process could be helpful for employees that contribute to the layout of the organization due to its involvement in identifying the problem, information searching and encoding, and generating an idea (Du et al., 2016). Therefore, employee involvement in an organization's layout could give workers the

opportunity to engage in the process of producing creative ideas to design a work setting that encourages creativity to grow.

An adequate work setting can serve as an invaluable resource for improving organizational outcomes. For instance, Benn, Teo, and Martin (2014) examined how organizational support for employee-driven environmental initiatives can decrease the number of waste facilities produce and increase employee engagement. They learned that employees that participated in the initiative to improve the organization's methods for reducing waste experienced high levels of engagement. This suggests a potential relationship between PWE, POS, and engagement, but additional research is required to determine if such a relationship exists. Nonetheless, there is a scarcity of research on the relationship between PWE and employee engagement.

Purpose of the Study

The purpose of this study is to expand on previous research and reinforce the connection between employee engagement and creativity. Kahn's (1990) model supports the idea that POS, well-being, and creativity meets the psychological conditions of employee engagement. Moreover, the social exchange theory also supports POS. Since current research has not further delved into the influence PWE has on stimulating employee engagement, it would serve in the best interest of organization-related research to analyze the significant relationships between these factors. By determining the significance of the relationships mentioned earlier, researchers and organizations could be more inclined to promote the importance of fostering engagement factors to bring about creativity.

Figure 2: Concept Map

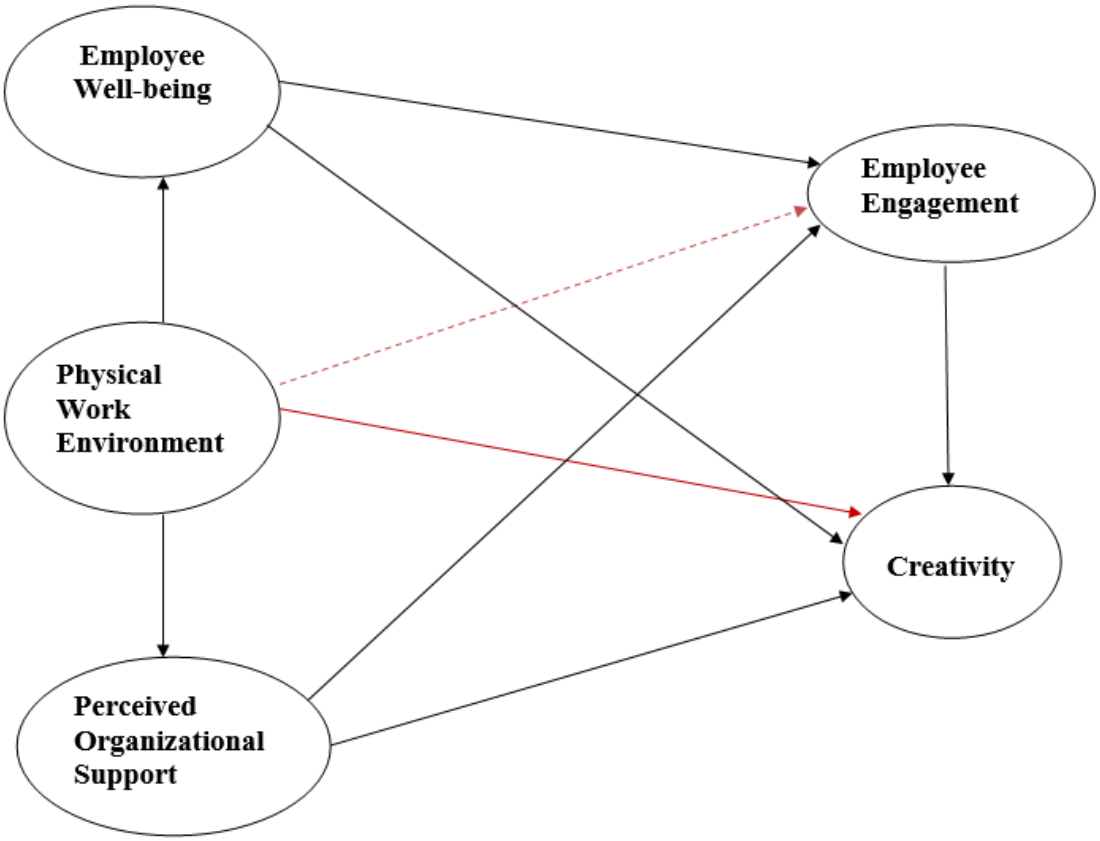


Figure 2: Based on the literature review findings, this concept map illustrates the relationship between the variables. A solid black line indicates a strong relationship, a solid red line indicates a moderate relationship, and a dotted red line indicates a weak relationship.

Hypotheses

The following hypotheses were developed to analyze the relationships that exist between employee engagement, creativity, PWE, employee well-being, and POS:

H1: Creativity will have a significant relationship with PWE.

H1a: Employee engagement will be positively related to creativity.

H1b: Employee well-being will be positively related to creativity.

H1c: POS will be positively related to creativity.

H2: Employee engagement will be positively related to PWE.

H2a: Employee well-being will be positively related to employee engagement.

H2b: POS will be positively related to employee engagement.

H3: PWE will be positively related to POS.

H3a: PWE will be positively related to employee well-being.

H4: Employee engagement will serve as a mediator between creativity and PWE.

CHAPTER III: METHODOLOGY

Participants

An online survey was administered to 99 randomly selected participants. Participants were recruited from a convenience sample of students that attend Austin Peay State University (APSU) Department of Psychological Science and Counseling by means of a flyer on the bulletin board in the department corridor. They were also recruited online through social media sites, which include Facebook and Linked-In. Eligibility to participate in this survey was determined by age and work experience, so the participants had to be 18 years or older with at least three months of work experience. At the discretion of one faculty member, students received extra credit for their participation in this study after presenting the confirmation page of participation. The APSU Institutional Review Board approved the protocol and recruitment method for the administration of the survey.

Classification of Participants

The demographic information in Figure 3 revealed that 60.6% of the participants are in the 18-25 age range. In Figure 4 the gender category was dominated by 73.7% females. Figure 5 displays 43.2% of the respondents have a high school diploma or equivalent (e.g. GED). Figure 6 illustrates 28.3% of the participants have 5-10 years of work experience. Figure 7 shows 47.5% of the participants were White/ Caucasian followed by 37.4% that were Black or African American. This information was collected to ensure participants fit within the criteria of having at least three months of work experience and were 18 years or older.

Figure 3: Participant Age Range

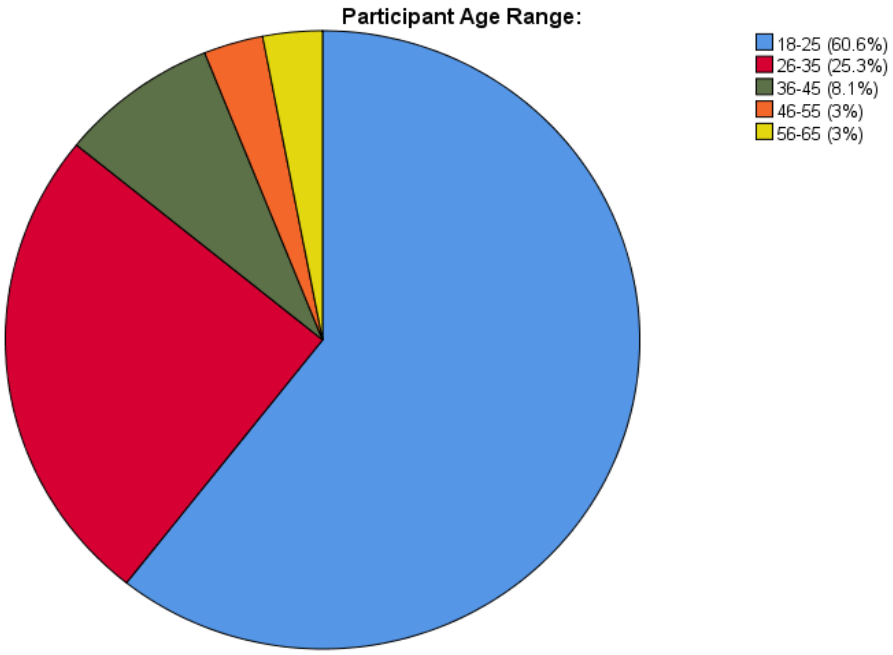


Figure 4: Participant Gender

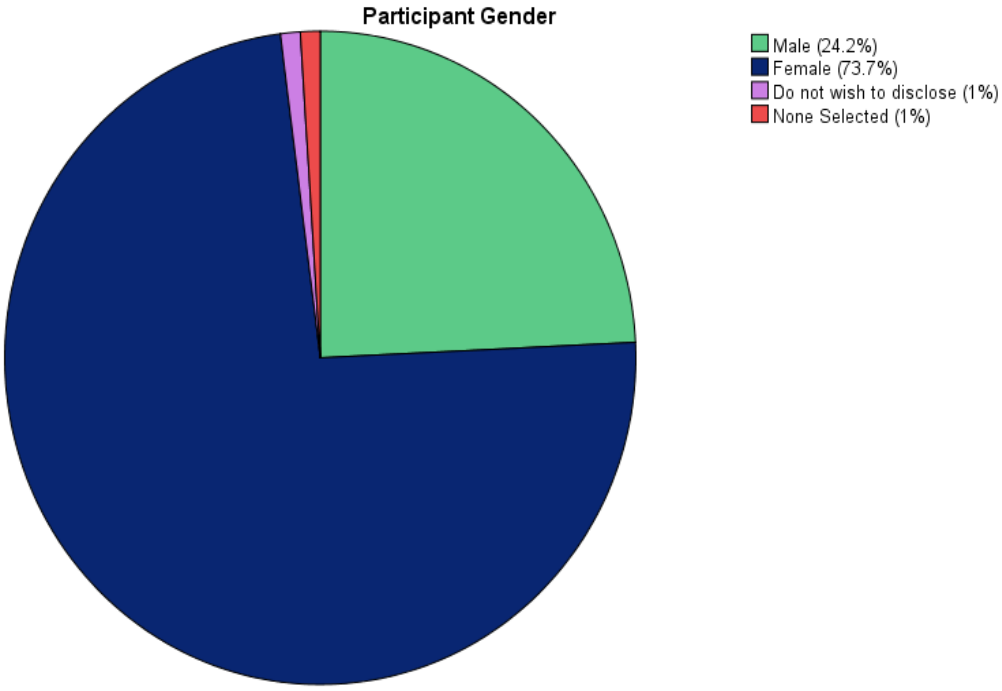


Figure 5: Participant Level of Education

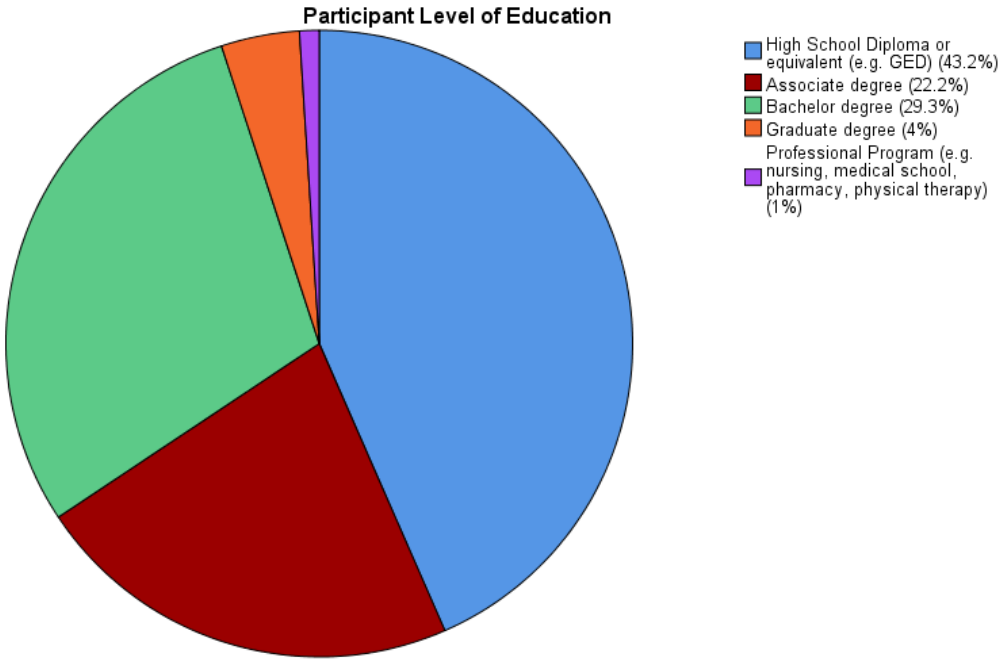


Figure 6: Participant Work Experience

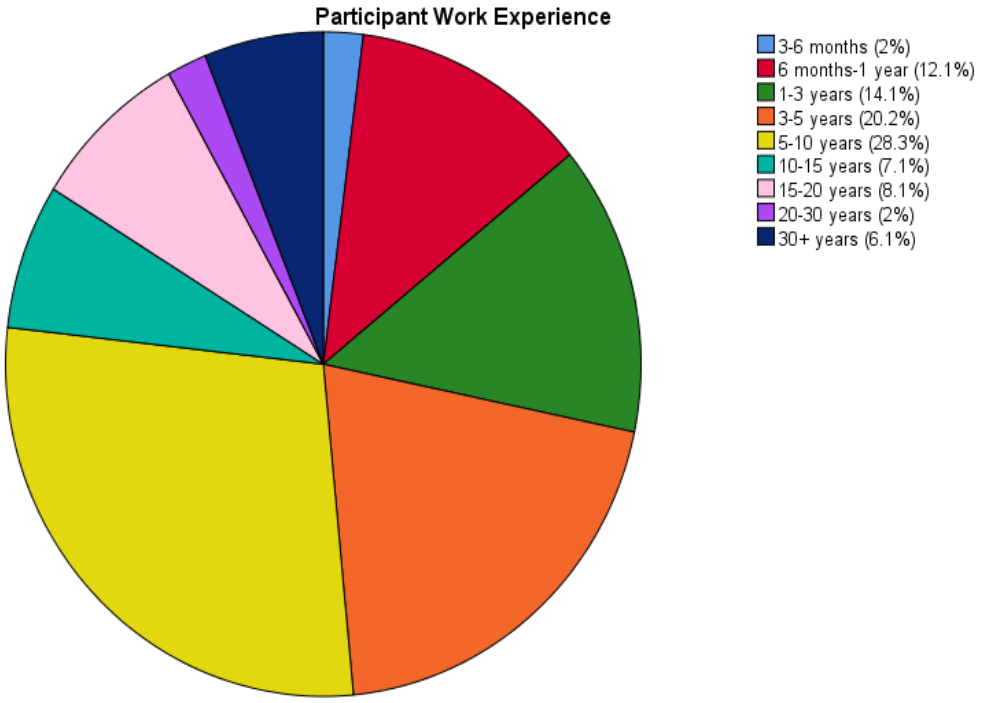


Figure 7: Participant Ethnicity

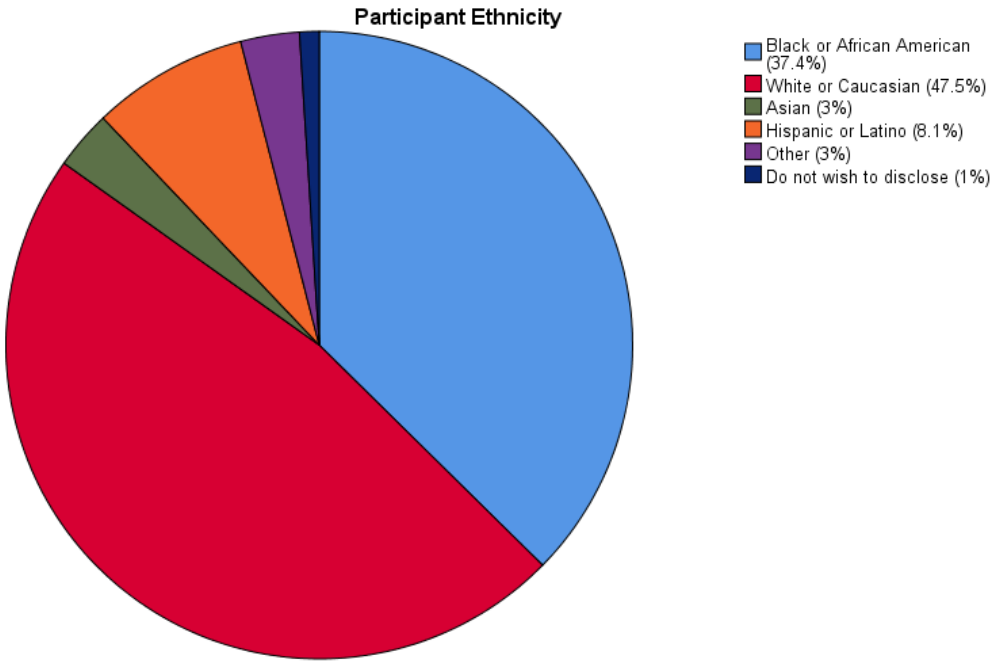


Table 1: Demographic Information

Work Experience	**3-6 months**	**6 months-1year**	**1-3years**	**3-5years**	**5-10years**	**10-15 years**
	2 (2%)	12 (12.1%)	14 (14.1%)	20 (20.2%)	28 (28.3%)	7 (7.1%)
	15-20years	20-30years	30+years			
	8 (8.1%)	2 (2%)	6 (6.1%)			
Ethnicity	Black or African American	White or Caucasian	Asian	Hispanic or Latino	Other	Do not wish to disclose
	37 (37.4%)	47 (47.5%)	3 (3%)	8 (8.1%)	3 (3%)	1 (1%)
Age	18-25	26-35	36-45	46-55	56-65	
	60 (60.6%)	25 (25.3%)	8 (8.1%)	3 (3%)	3 (3%)	
Level of Education	High School Diploma	Associate Degree	Bachelor's degree	Graduate Degree	Professional Program	
	43 (43.2%)	22 (22.2%)	29 (29.3%)	4 (4%)	1 (1%)	
Gender	Male	Female	Do not wish to disclose	None selected		
	24 (24.2%)	73 (73.7%)	1 (1%)	1 (1%)		

(total: 99 participants)

Measures

Work Engagement Scale. This study utilized Schaufeli and Bakker's (2004) nine-item version of the Utrecht Work Engagement Scale (UWES) to measure work engagement. [Appendix A] It measures three dimensions of work engagement, which includes dedication (e.g. "I am enthusiastic about my job"), vigor (e.g. "At my work, I feel bursting with energy"), and absorption (e.g. "I feel happy when I'm working intensely") (Schaufeli & Bakker, 2004, p.21). The UWES is rated on a seven-point

Likert scale from 0 (never) to 6 (always). Timms and Brough's (2013) found significant reliability alpha's for absorption T1=0.74 and T2=0.75, vigor T1=0.82 and T2=0.84, and dedication T1=0.81 and T2=0.86 with T1 and T2 representing the first and second administration of the survey. This scale has an average reliability alpha of 0.93 (Abma, van der Klink, & Bültmann, 2013).

Physical Work Environment Scale. The 18-item version of the Physical Work Environment Satisfaction Questionnaire (PWESQ) was adapted from Carlopio's (1996) 37-item scale, which was also derived from the 42-item version of the PWESQ (Carlopio, 1986). [Appendix B] This questionnaire was developed to measure the satisfaction employees have with their physical work surroundings. The three dimensions that make up this scale include environmental design, facilities, and equipment and tools. The PWESQ utilizes a five-point Likert scale to rate responses. The reliability alphas are 0.82 for the environment, 0.84 for facilities, and 0.89 for equipment and tools (Carlopio, 1996).

Perceived Organizational Support Scale. The short version of Eisenberger et al.'s (1986) survey of Perceived Organizational Support was used to measure POS (Rhoades & Eisenberger, 2002). [Appendix C] This scale is comprised of eight items that utilize a seven-point Likert rating system and its reliability alpha is 0.90.

Employee Well-being Scale. The World Health Organization (WHO) 5 was used to measure the respondents' well-being and it was adapted from the Psychological General Well-being Scale, the General Health Questionnaire, and Zung scales for anxiety, depression, and distress (Bech, 1993). [Appendix D] This scale consists of five

items that are rated on a six-point Likert scale. Studies have found Cronbach's α's from 0.83 to 0.85 (De Souza & Hidalgo, 2011; Mortazavi, Mousavi, Chaman, & Khosravi, 2015). Although the scale was initially developed for diabetes patients, the WHO-5 is a generic well-being scale that can be utilized in various conditions and fields of study such as psychology, workplace conditions, cardiology, and depression (Nielsen & Randall, 2012; Topp, Ostergaard, Sondergaard, & Bech, 2015).

Creativity Scale. Studies have utilized the self-report achievement inventory to measure creativity (Furnham, Batey, Anand, & Manfield, 2008; Kaufman, 2012). Carson et al.'s (2005) Creative Achievement Questionnaire (CAQ) was used to assess creative behavior across 10 domains of creativity. [Appendix E] These domains include visual arts (α-0.77), music (α-0.82), creative writing (α-0.77), dance (α-0.86), drama (α-0.70), architecture (α-0.82), humor (α-0.85), scientific discovery (α-0.80), invention (α-0.87), and culinary achievement (α-0.80). CAQ has a total consistency reliability alpha of 0.96. The CAQ showed a predictive validity of $r = 0.59$ for artist ratings (Zabelina, Saporta, & Beeman, 2016). This scale is rated on a ranking system that requires participants to select the statements that best describes their level of talent in a domain. The first part of the CAQ lists 13 statements and participants are instructed to select the domains they demonstrate talent. The second part consists of 10 domains with 7 statements that are assigned a value from 0 to 7. Some statements are marked with an asterisk and participants are instructed to include the number of times they have exhibited a talent for those statements. The last question in part two allows participants to include other creative achievements that were not listed in the survey.

Procedure

Qualtrics XM (https://apsu.co1.qualtrics.com) was utilized to distribute and collect survey data. The data collection period occurred from February 5, 2019 until March 25, 2019, which was approximately six weeks and six days. A bulletin announcement was posted to recruit participants from the APSU Department of Psychological Science and Counseling. Participant eligibility was determined by two requirements; participants should be 18 years or older and have at least three months of work experience. Eligible participants were prompted to go to a designated classroom to take the survey in the presence of a proctor. Psychology students were offered extra credit from their professors as a reward for participating in this study.

Informed consent and demographic information were collected before participants could take the survey. After the survey was completed, participants had to show the proctor the completion screen in order to receive extra credit from their respective professor. Online APSU psychology students were also given the opportunity to participate in this study. A post similar to the recruitment poster on campus was used to recruit online students. At the end of the survey, participants e-mailed a screenshot of the completion page to their professors for extra credit. Other online participants were recruited from Linked-In and Facebook. On these social media sites, a description of the study was posted with a link that prompted participants to contribute to this study.

Data Analysis

Following the data collection period, Qualtrics XM was utilized to remove participants that failed to complete this survey. The data from the remaining 99

participants were loaded into IBM SPSS Statistics 25 to conduct reliability analyses for each of the following: Utrecht Work Engagement Scale (UWES), Survey of Perceived Organizational Support (POS), Physical Work Environment Satisfaction Questionnaire (PWESQ), World Health Organization (WHO) 5- Well-being, and Creative Achievement Questionnaire (CAQ). Then correlation analyses were conducted to determine the relationships between the engagement, well-being, POS, PWE and creativity variables. Lastly, a mediation analysis was conducted post hoc to identify the mediator between engagement, POS, and well-being.

CHAPTER IV: RESULTS

Descriptive Statistics

Table 2 presents the descriptive statistics for the following: Utrecht Work Engagement Scale (UWES), Survey of Perceived Organizational Support (POS), Physical Work Environment Satisfaction Questionnaire (PWESQ), World Health Organization (WHO) 5- for Well-being, and Creative Achievement Questionnaire (CAQ).

Table 2: Descriptive Statistics of UWES, PWESQ, POS, PWESQ, & CAQ

Descriptive Statistics of UWES, PWESQ, POS, PWESQ, & CAQ					
	N	Minimum	Maximum	Mean	Standard Deviation
Engagement (UWES)	99	1.22	7.00	4.5421	1.02578
PWE (PWESQ)	99	2.06	4.83	3.5903	.55977
POS	99	1.50	7.00	4.6744	1.35030
Well-being (WHO-5)	99	1.20	6.00	3.7000	1.03776
Creativity (CAQ)	99	.00	9.25	1.1250	1.65533
Valid N	99				

Reliability Analysis

Reliability analyses were conducted to determine the reliability of the UWES, PWESQ, POS, WHO-5, and CAQ scales. Items 34 ("The organization fails to appreciate any extra effort from me"), 35 ("The organization would ignore any complaint from me"), 37 (Even if I did the best job possible, the organization would fail to notice"), and 39 ("The organization shows very little concern for me") on the POS scale were reverse coded to increase the Cronbach alpha from -.576 to .914. Two items that represent the

visual arts (Item 47) and dance (Item 49) domains of creativity were dropped from the CAQ scale to increase the Cronbach alpha from .700 to .863. Table 3 shows Cronbach's alphas for UWES, PWESQ, POS, WHO-5, and CAQ.

Table 3: Reliability Statistics for UWES, PWESQ, POS, WHO-5, & CAQ

Reliability Statistics for UWES, PWESQ, POS, WHO-5, & CAQ		
Scales	**Cronbach's Alpha**	**Number of Items**
Engagement (UWES)	.896	9
PWE (PWESQ)	.887	18
POS	.914	8
Well-being (WHO-5)	.865	5
Creativity (CAQ)	.863	8

Correlation Analysis

The significant relationships that exist between engagement, PWE, POS, well-being, and creativity were examined in Hypotheses 1-3. The findings in Table 4 display the correlations between the factors. Hypothesis 1, creativity will have a significant relationship with PWE, was not supported by the finding r = .093 at the significance level .359. Hypothesis 1a, employee engagement will be positively related to creativity, was not supported by the finding r = .113 at the significance level .265. Hypothesis 1b, employee well-being will be positively related to creativity, was not supported by the finding r = .148 at the significance level .144. Hypothesis 1c, POS will be positively related to creativity, was not supported by the finding r = .145 at the significance level

.153. The significance for Hypotheses 1-1c exceeded $p < .01$. The results of the correlation analysis in Table 4 does not support Hypothesis 4.

Table 4 displays the significant findings for Hypothesis 2. For Hypothesis 2, employee engagement was positively related to PWE ($r = .481$, $p < .01$). Hypothesis 2a, employee well-being positively correlated with employee engagement ($r = .532$, $p < .01$). Hypothesis 2b, POS positively correlated with employee engagement ($r = .522$, $p < .01$).

Table 4: Correlations for Engagement, PWE, POS, Well-being, & Creativity

Correlations for Engagement, PWE, POS, Well-being, & Creativity					
		Engagement	**PWE**	**POS**	**Well-being**
Engagement	Pearson	1	.481**	.522**	.532**
	Sig. (2-tailed)		.000	.000	.000
	N	99	99	99	99
Creativity	Pearson	.113	.093	.145	.148
	Sig. (2-tailed)	.265	.359	.153	.144
	N	99	99	99	99
** Correlation is significant at the 0.01 level					

Table 5 displays the correlations for PWE, POS, and well-being. Hypothesis 3, PWE was positively related to POS ($r = .488$, $p < .01$). Hypothesis 3a, PWE positively correlated with employee well-being ($r = .281$, $p<.01$).

Table 5: Correlations for PWE, POS, & Well-being

Correlations for PWE, POS, & Well-being			
		POS	**Well-being**
PWE	Pearson	.488**	.281**
	Sig. (2-tailed)	.000	.000
	N	99	99
Well-being	Pearson	.481**	1
	Sig. (2-tailed)	.000	
	N	99	99
** Correlation is significant at the 0.01 level.			

CAQ Feedback for Talent in Other Areas Items

Carson et al. (2005) instructed administrators of the CAQ to only use the 10 questions related to the domains of creativity in part two to calculate the creativity score. The first part and last item from part two of the creativity scale were not utilized to calculate creativity scores. The first part of the CAQ scale was a select all that applies question that asked participants to place a checkmark beside areas they exhibit talent, ability, or training for the following: visual arts (painting, sculpture), music, dance, individual sports (tennis, golf), team sports, architectural design, entrepreneurial ventures, creative writing, humor, inventions, scientific inquiry, theater and film, and culinary arts. Figures 8 and 9 illustrate the participants' responses to the first part.

For the last item on the CAQ scale, the data revealed that 89.89% of participants did not list other creative achievements. However, 10.1% of the participants listed

achievements in the following: painting and drawing, multiple aerial performances (Lyra and silks), recognition in photography in which the participant "placed in region, state, and internationally for my knowledge and performance in Parliamentary Procedure", Aveda Edwin Neill II Full Potential Competition Preliminary Hair Colorist, "I have performed with jazz bands, concert bands, and marching bands. These were all in high school and could only be participated based on talent", "Pageant winner, speaker, talent shows, singing groups", academic achievement in psychology-high school in the 11th grade, Debate skills and public speaking, "I actively take care of clients' animals. My hobbies include taking care of animals, listening to crime podcasts and exploring the psychology realm", and oral history.

Figure 8: Responses for Creative Writing, Humor, Inventions, Scientific Inquiry, Theater and Film, & Culinary Arts

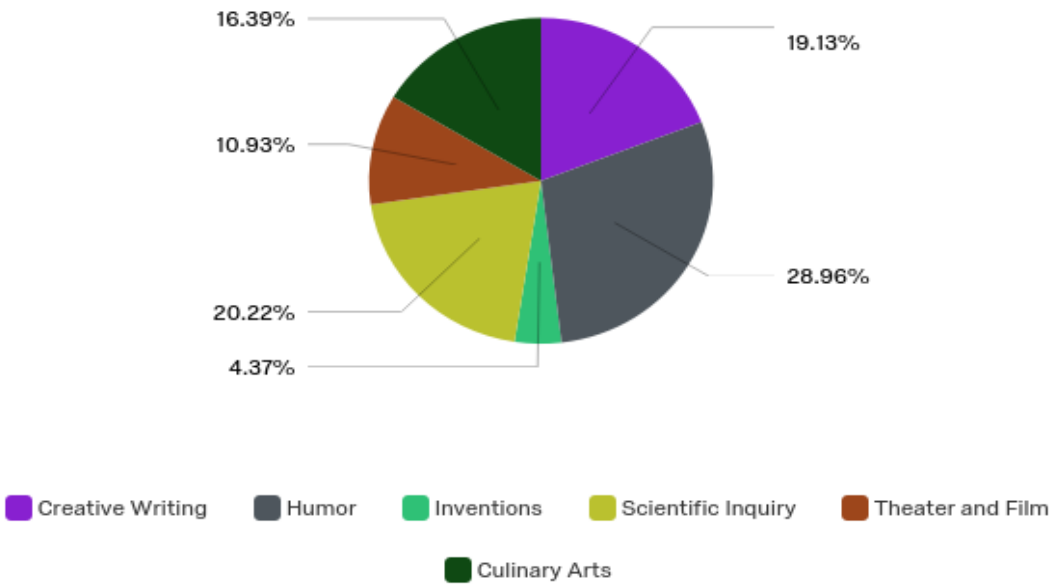
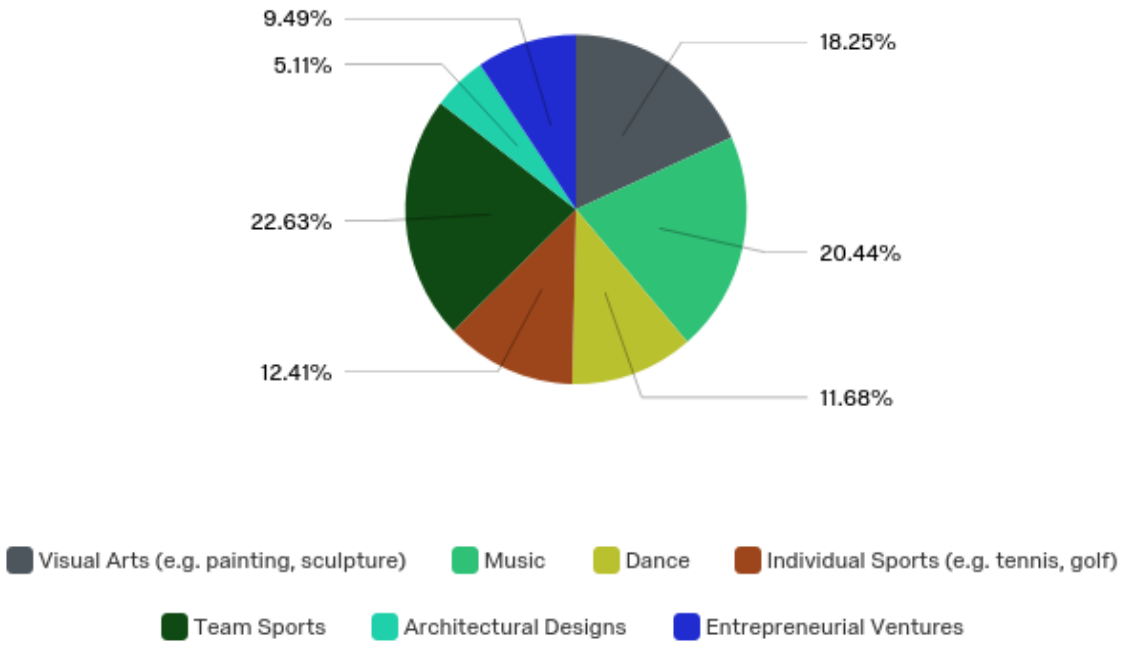


Figure 9: Responses for Visual Arts, Music, Dance, Individual Sports, Team Sports, Architectural Designs, & Entrepreneurial Ventures



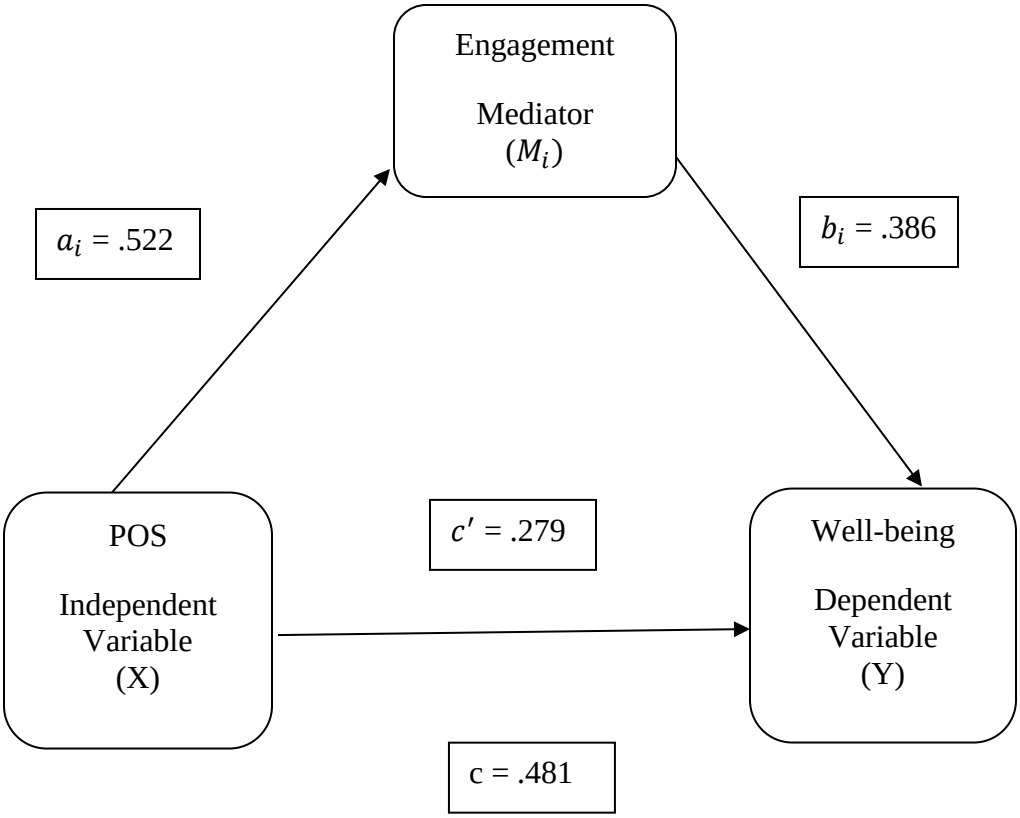
Post Hoc Analysis

The results of the regression analyses in Table 6 show that the relationship between well-being (dependent variable) and POS (independent variable) is mediated by engagement. Using Hayes (2017) mediation model (No. 4), Figure 10 illustrates the relationships for engagement, well-being, and POS. The linear regression produced a_i = .522, b_i = .386, c' = .279 with a_i representing the value of the POS-engagement relationship, b_i is the engagement-well-being relationship, and c' is the value of the POS-well-being relationship. A linear regression was conducted to express the value of the direct path from POS to well-being (c = .481).

Table 6: Coefficients α

Coefficients α						
		Unstandardized Coefficients				
Model	Variables	B	Std. Error	Std. Coefficient β	T	Sig.
1	(Constant)	2.689	.320	---------	8.403	.000
	POS	.396	.066	.522	6.023	.000
2	(Constant)	.923	.408	---------	2.265	.026
	POS	.215	.075	.279	2.872	.005
	Engagement	.391	.098	.386	3.970	.000
3	(Constant)	1.973	.333	---------	5.929	.000
	POS	.369	.068	.481	5.398	.000
Model 1-a. dependent variable: Engagement						
Model 2-a. dependent variable: Well-being						
Model 3-a. dependent variable: Well-being						

Figure 10: Mediation Model for Engagement, POS, & Well-being



M_i = a_i x b_i = .522 x .386 = .201

Mediation Model 4 (Hayes, 2017)

CHAPTER V: DISCUSSION

Evaluation of Findings

The intention of this study was to examine the relationships between PWE, POS, employee well-being, engagement, and creativity. The results for hypotheses 1-1c show that none of the variables significantly influenced creativity. This finding was unexpected due to reports from various studies that showed an increase in evidence that supports the relationship between the physical environment and creativity (Amabile et al., 1996; McCoy & Evans, 2010). However, there were studies that did not find evidence in support of the correlation between PWE and creativity. This could be attributed to the issue researchers have with connecting the quantitative and tangible structure of PWE with the intangible and qualitative nature of creativity (Lee, 2016). Kahn's (1990) psychological condition of engagement, meaningfulness, supports the connection between creativity and engagement through its ability to stimulate the creative process. Several studies mentioned the significant relationship POS shares with creativity. For instance, Isaksen and Lauer (2001) identified significant relationships between POS, a positive work environment, and creativity. Similar evidence can be seen in Wright & Walton's (2003) study that reported a significant correlation between well-being and creativity. The literature that explored these relationships was influential to this study's development of the first hypothesis. Unfortunately, this study was unable to replicate the significant relationships that were discovered in previous studies.

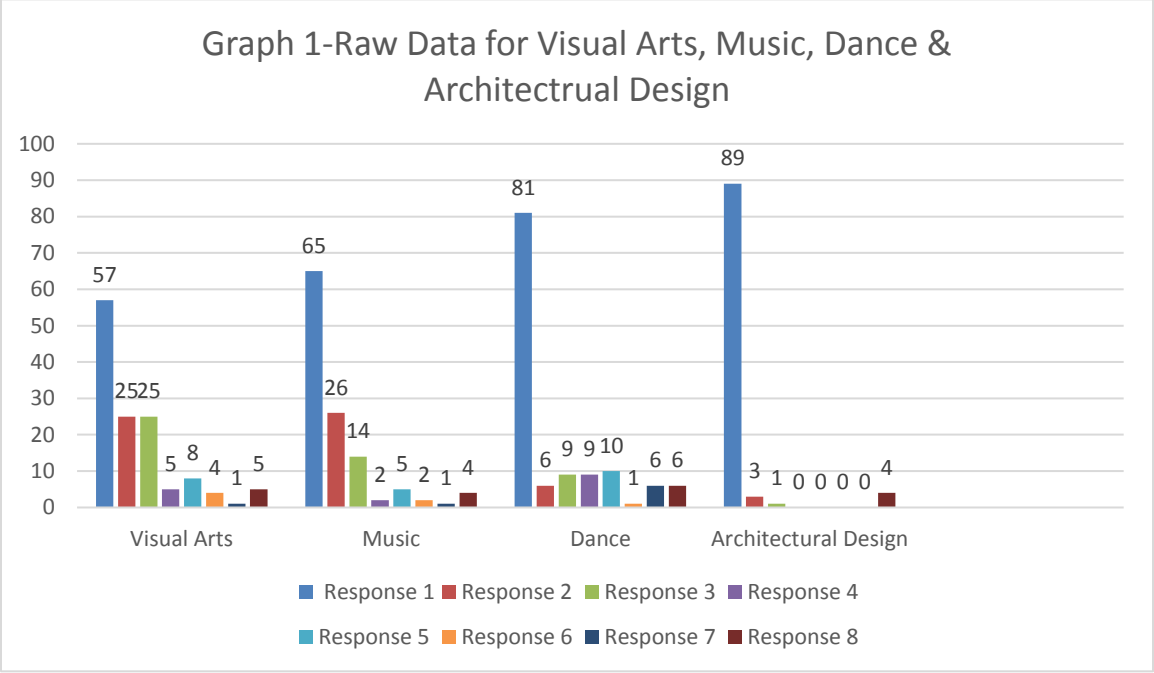
These findings suggest the likelihood that Carson et al.'s (2005) CAQ scale is not an effective tool to measure creativity in this study. Although this study found that CAQ was reliable with a Cronbach α of 0.863 and Carson et al. (2005) reported a Cronbach α

of 0.96, creativity did not share significant relationships with the other variables. The issue with this finding could be related to the domains CAQ measures, which include visual arts, music, creative writing, dance, drama, architecture, humor, scientific discovery, invention, and culinary achievement. These domains were based on the idea that creative behavior can be determined by past creative behavior (Colangelo, Kerr, Hallowell, Huesman, & Gaeth, 1992). However, Klijn and Tomic (2010) disclosed the idea that creativity tools should incorporate and measure the support received from the workplace, challenging work, workload pressure, resources, autonomy or freedom, and organization and supervisor support. It may be more effective to utilize or construct a creativity scale that specifically measures on-the-job creativity.

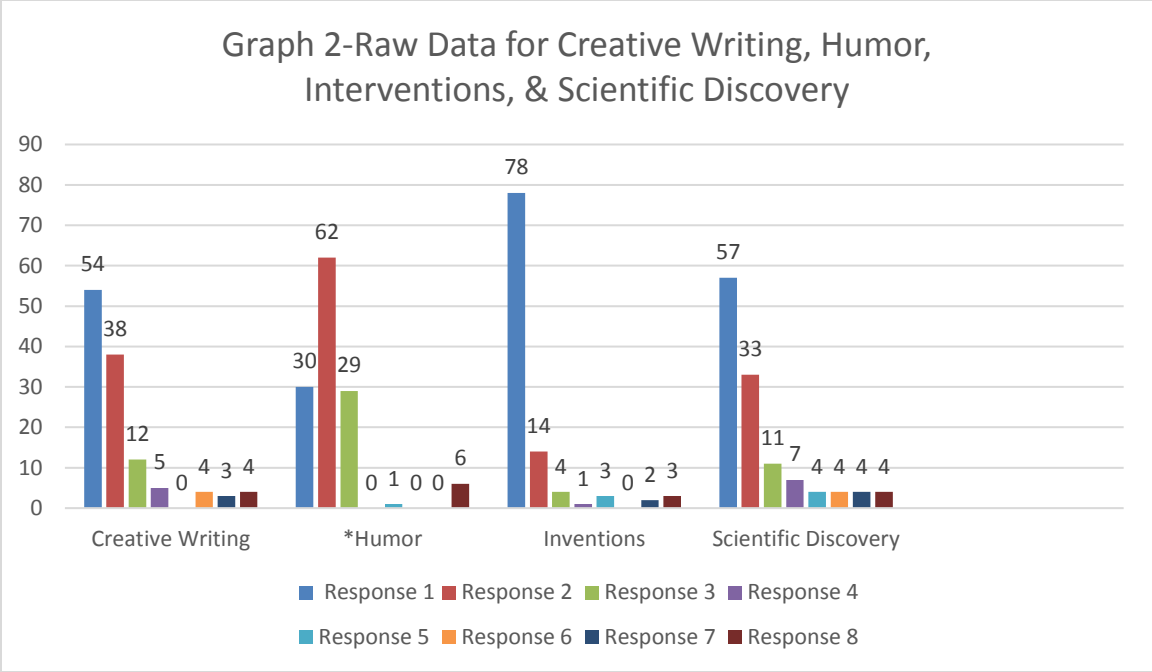
Silvia, Wigert, Reiter-Palmon, and Kaufman (2012) identified issues that inhibit the effectiveness of the CAQ such as most participants reporting zeros by selecting the first response choice that has no value. An examination of the raw data for this study revealed that many of the participants' responses to the domains of creativity had no value or were worth zero (refer to Figure 11). This indicates that participants do not have training or a recognized ability in visual arts, music, creative writing, dance, drama, architecture, scientific discovery, and invention. The only exceptions were humor and culinary arts. In these domains, most participants selected the second responses "people have commented on my original sense of humor" and "I often experiment with recipes" followed by the first response "I do not have training or a recognized ability in this field" (Carson et al., 2005). Though the visual arts and dance domains were dropped to increase Cronbach's alpha from .700 to .863, it is worth analyzing the data of these categories to recognize the pattern of zero value responses. Another problem that arises

from this scale is how participants interpret the questions (Silvia et al., 2012). Interpretation issues are often associated with self-report items (Biernat, 2003). Biernat also mentioned that the scale anchors are subjectively defined by people and they interpret items in several different ways. In other words, the way survey items are interpreted varies from person to person. Thus, the true intentions of the questions are likely lost to interpretation.

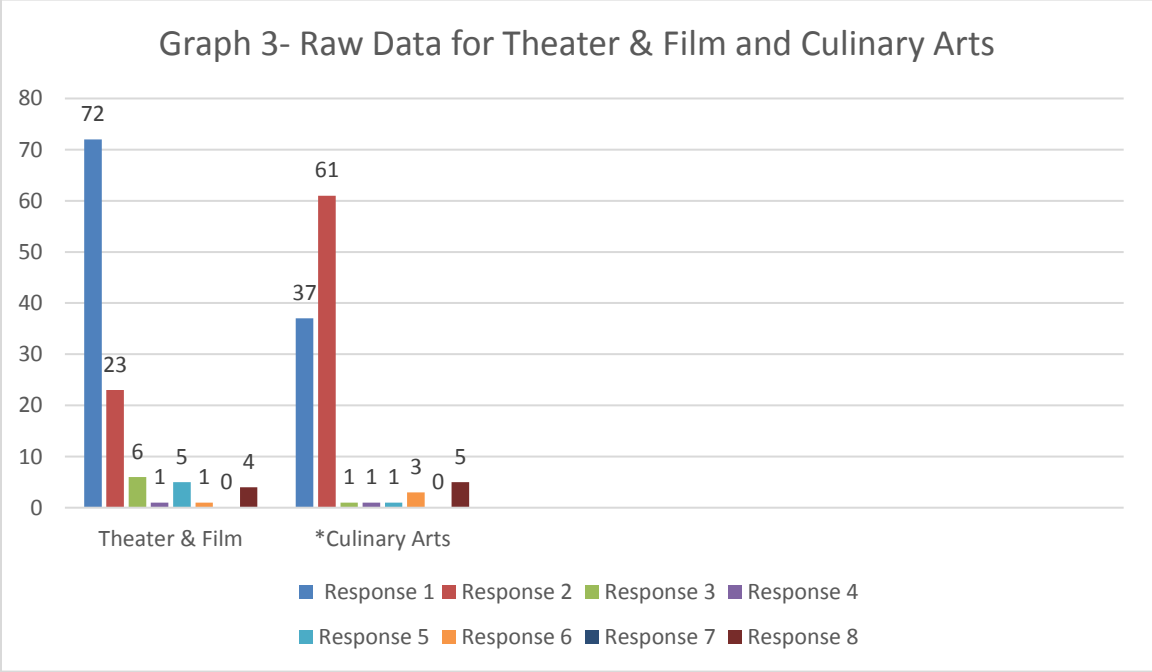
Figure 11: Raw Data for the CAQ Scale (Graphs 1-3)- The number of participants that selected each response is included in the bar graphs. See Appendix E for the list of responses for each dimension of creativity.



Graph 1 illustrates most participants selected response 1 (represents zero & I do not have training or recognized ability in this field) for the following: Visual Arts, Music, Dance, and Architectural Design. In graphs 2 and 3, most participants selected response 1 for Creative Writing, Inventions, Scientific Discovery, and Theater & Film.



Graphs 2 and 3 shows most participants selected response 2 (people have commented on my original sense of humor & I often experiment with recipes) followed by response 1 (I do not have training or recognized ability in this field) for *Humor and *Culinary Arts.



This study found that employee engagement was positively related to PWE. The results showed the variables moderately correlated with each other. The finding established a connection between PWE and engagement despite a low quantity of PWE and engagement specific literature. The creative process engagement (i.e., engagement in the creative process) concept could supply some insight into the influence engagement has on the work environment. Du et al. (2016) mentioned that engaging in the creative process can help employees contribute ideas for the arrangement of the organization. Although this involves the creative process, what one should take away from this concept is engagement's role in initiating the process of identifying the problem, information searching and encoding, and generating an idea (Shuck & Wollard, 2010). This is significant to a person's need to express one's self emotionally, cognitively, and behaviorally to achieve organizational outcomes (Kahn, 1990). More importantly, a person's perception of the work environment influences his/her level of engagement and inspires people to achieve high levels of engagement (Anitha, 2014).

Results showed that employee well-being was positively correlated with employee engagement. High levels of well-being are associated with high levels of engagement, which produces beneficial organizational outcomes (Wright & Cropanzano, 2000). Robertson and Cooper (2010) also found that well-being is influential to the development of high levels of employee engagement. On the other hand, low levels of employee engagement were found to decrease an employee's sense of well-being (Truss et al., 2013). The evidence suggests that well-being and engagement collaborate in a way that positively increases each other. This study's finding replicated the results from previous studies. Therefore, organizations should expect engaged employees to

experience an improved sense of well-being and feel motivated to achieve organizational success (MacLeod & Clarke, 2009). A positive sense of well-being can produce engaged employees that achieve several beneficial organizational outcomes such as the responsibility to accomplish business goals, creativity, and increase motivation and performance (Anitha, 2014; Chen, 2016).

Employee engagement was positively correlated with POS. The finding in this study recognized a moderate relationship between the variables. This finding was significant due to engagement having an influence on a person's connection to work. Employees that experience POS are committed to their work duties and devote the emotional effort to ensure their responsibilities are accomplished (Shore & Shore, 1995). POS also shared a moderate relationship with PWE. These variables are connected by the two categories of the work environment, which include PWE and non-PWE (Carlopio, 1996). As mentioned earlier, the non-PWE is comprised of POS, well-being, emotional safety, and promotions. The literature suggests that the relationship between POS and PWE is to be expected because of the interconnected role POS and PWE fulfills in the work environment. Organizations that want to create a harmonious work environment must provide the means to develop effective leadership, training opportunities, career development, co-worker and team relationships, and great pay incentives (Anitha, 2014).

PWE had a weak correlation with employee well-being. This relationship may be weak, but it is one worth further investigation. Well-being is associated with positive job performances, high productivity, and pleasant work environments (Bakke, 2005; Pawar, 2016). According to Anitha (2014), well-being is important for understanding the impact

organizations have on their employees. The correlation strength could be accredited to the WHO-5's failure to provide a detailed assessment of employee well-being. Due to this scale's focus on only the positive characteristics of well-being, using an alternate scale could possibly provide a better measure of well-being. For instance, Warr's (1990) IWP Multi-Affect Indicator test measures positive and negative feelings to determine well-being. This scale was reported to have significant alpha values that range from 0.75 to 0.90 (Warr, Bindl, Parker, & Inceoglu, 2014). Warr's IWP Multi-Affect scale could conceivably yield a stronger correlation with PWE since it is a more inclusive scale for negative and positive feelings. More importantly, it specifically measures work-related feelings.

Since engagement, PWE, POS, and well-being did not significantly correlate with creativity, a mediation analysis was not conducted to identify the mediator between creativity, PWE, and engagement. Alternatively, a post hoc analysis was administered to discover the mediator among engagement, POS, and well-being. This consisted of conducting a series of regression analyses to discover whether engagement mediates the relationship between POS and well-being. Hayes' (2017) mediation model 4 was utilized to develop an illustration of the relationships and standardized coefficient β values in Figure 10. The findings showed that POS indirectly effects well-being through the mediator, which is engagement.

Future Considerations and Limitations

This study encountered issues establishing relationships between engagement, PWE, POS, well-being, and creativity. Future studies should consider the use of interviews to provide insight into the relationships between creativity and the other

variables. Interviews are recognized tools to measure creativity (Weisberg, 2006). Martens (2011) utilized this approach by conducting in-depth interviews on creative people to understand how the physical environment influenced their creativity. Another future consideration is for researchers to submit the participants' feedback for the first and last items of the CAQ scale for creativity to a response bank. Creating a response bank could possibly help and encourage Carson et al. and other researchers to further develop and expand the CAQ.

Despite recruiting participants from various sources, the low number of participants was a limitation of this study. Even with the incorporation of social media (i.e., Facebook and Linked-In), participants were not inclined to participate in this study. This study would have benefited from a more diverse participant pool. Most of the respondents were Caucasian, African American, Female, between 18-25 years old, and high school graduates. Work experience was the only category with a diverse range. Although the results were partially expected, an increase of participants from a more diverse pool could improve this study's findings.

Practical Implications

There are several practical implications associated with the significant relationships of this study. According to Caesens et al. (2014), POS is the most influential support for engagement. Somech and Drach-Zahavy (2013) believe supervisors that support their subordinates in an emotional and helpful capacity could increase POS. POS can be encouraged by supervisors that coach and direct their subordinates and through employee training, which also enhances autonomy to carry out work duties (Eisenberger & Stinglhamber, 2011). Another practical implication of the

findings suggests well-being is significant to engagement. If organizations want to positively affect employee well-being, it is necessary to create a culturally sensitive and all-embracing workplace (Shuck & Reio, 2014). This is important for creating an environment that advocates engagement and where employees believe that their contributions and opinions are valuable (Kahn, 2010). Furthermore, interventions need to be implemented to identify the most appropriate human resource (HR) practitioners or decision makers in the organization to educate employees on what engagement is and how to promote it (Rothmann & Welsh, 2013). Finally, managers are responsible for ensuring a good physical surrounding for employees because PWE in conjunction with the emotional aspects of the work environment or non-PWE are key factors of employee engagement (Anitha, 2014). This requires management to provide a safe workplace, allow employees to have a balanced work and personal life, and make the organization's achievements available so employees take ownership or feel integral to the company's progress and success.

Conclusion

To summarize, the findings from this study found that creativity did not correlate with engagement, PWE, POS, and well-being. This finding was unexpected given that the literature supported creativity's connections to engagement, PWE, POS, and well-being. However, the findings from this study supported the relationships established through Kahn's model of engagement and other literature sources for engagement, PWE, POS, and well-being. A major success of this study was discovering a positive correlation between PWE and engagement. The significant findings from this study should help organizations understand the importance of securing their employees'

needs. By ensuring employees have a good sense of well-being, POS, and PWE, organizations and employees could experience the benefits of engagement, which include decreased turnover rates, increased productivity, a positive connection to work, the responsibility to accomplish business goals, motivation, increased performance, organizational success, and creativity (Anitha, 2014; Bindu, 2012; Chen, 2016; Rai, 2016).

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Appendix A

Utrecht Work Engagement Scale: UWES 9- Short version (Schaufeli & Bakker, 2004)

	Never	Almost never (A few times a year or less)	Rarely (Once a month or less)	Sometimes (A few times a month)	Often (Once a week)	Very often (A few times a week)	Always (Everyday)
1. At my work, I feel bursting with energy.	0	1	2	3	4	5	6
2. At my job, I feel strong and vigorous.	0	1	2	3	4	5	6
3. When I get up in the morning, I feel like going to work.	0	1	2	3	4	5	6
4. I am enthusiastic about my job.	0	1	2	3	4	5	6
5. My job inspires me.	0	1	2	3	4	5	6
6. I am proud of the work that I do.	0	1	2	3	4	5	6

7. I am immersed in my work.	0	1	2	3	4	5	6
8. I get carried away when I'm working.	0	1	2	3	4	5	6
9. I feel happy when I am work intensely.	0	1	2	3	4	5	6

Appendix B

Physical Work Environment Satisfaction Questionnaire (PWESQ)-18-Item (Carlopio, 1996)

How satisfied are you with work:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The lighting in your work area	1	2	3	4	5
The direction of the light which enters your work area	1	2	3	4	5
The air quality in your work area	1	2	3	4	5
The surfaces you usually walk on	1	2	3	4	5
The surfaces you frequently work on	1	2	3	4	5
The general atmosphere in your work area	1	2	3	4	5
In general, the type of facilities provided at work	1	2	3	4	5
The cleanliness of the facilities at work	1	2	3	4	5
The cleanliness of the restrooms/toilet you use	1	2	3	4	5
The recreation facilities provided	1	2	3	4	5
The size of the eating facilities/ lunch room	1	2	3	4	5
The cleanliness of the eating facilities/lunch room	1	2	3	4	5

The pleasantness of the eating facilities/lunch room	1	2	3	4	5
The number of tools/machines with which you have to work (with)	1	2	3	4	5
The efficiency of the tools with which you have to work (with)	1	2	3	4	5
The effectiveness of the tools with which you work (with)	1	2	3	4	5
The effectiveness of the machines with which you work (with)	1	2	3	4	5
The efficiency of the machines with which you work (with)	1	2	3	4	5

Appendix C

Survey of Perceived Organizational Support—8-item Short Version (Eisenberger et al., 1986)

(R) = reverse scored items	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Moderately Agree	Strongly Agree
1. The organization values my contribution to its well-being.	0	1	2	3	4	5	6
2. The organization fails to appreciate any extra effort from me. (R)	0	1	2	3	4	5	6
3. The organization would ignore any complaint from me. (R)	0	1	2	3	4	5	6
4. The organization really cares about my well-being.	0	1	2	3	4	5	6
5. Even if I did the best job possible, the organization would fail to notice. (R)	0	1	2	3	4	5	6
6. The organization cares about my general satisfaction at work.	0	1	2	3	4	5	6

7. The organization shows very little concern for me. (R)	0	1	2	3	4	5	6
8. The organization takes pride in my accomplishments at work.	0	1	2	3	4	5	6

Appendix D

The World Health Organization (WHO)-5 Well-Being Index (Bech, 1993)

Over the past 2 week….	All of the time	Most of the time	More than half the time	Less than half the time	Some of the time	At no time
I have felt cheerful and in good spirits	5	4	3	2	1	0
I have felt calm and relaxed	5	4	3	2	1	0
I have felt active and vigorous	5	4	3	2	1	0
I woke up feeling fresh and rested	5	4	3	2	1	0
My daily life has been filled with things that interest me	5	4	3	2	1	0

Appendix E

Creative Achievement Questionnaire (Carson, Peterson, & Higgins, 2005)

<table>
<tr><td rowspan="2">Part 1</td><td colspan="2">Place a check mark beside the areas in which you feel you have more talent, ability, or training than the average person.</td></tr>
<tr><td colspan="2">_visual arts (painting, sculpture)
_music
_dance
_individual sports (tennis, golf)
_team sports
_architectural design
_entrepreneurial ventures
_creative writing
_humor
_inventions
_scientific inquiry
_theater and film
_culinary arts</td></tr>
<tr><td rowspan="3">Part 2</td><td colspan="2">Place a check mark sentences that apply to you. Next to sentences with an asterisk (*), type the number of times this sentence applies to you.</td></tr>
<tr><td>A</td><td>Visual Arts (painting, sculpture)
_0. I have no training or recognized talent in this area (Skip to Music).
_1. I have taken lessons in this area.
_2. People have commented on my talent in this area.
_3. I have won a prize or prizes at a juried art show.
_4. I have had a showing of my work in a gallery.
_5. I have sold a piece of my work.
_6. My work has been critiqued in local publications.
*_7. My work has been critiqued in national publications.</td></tr>
<tr><td>B</td><td>Music
_0. I have no training or recognized talent in this area (Skip to Dance).
_1. I play one or more musical instruments proficiently.
_2. I have played with a recognized orchestra or band.
_3. I have composed an original piece of music.</td></tr>
</table>

		_4. My musical talent has been critiqued in a local publication. _5. My composition has been recorded. _6. Recordings of my composition have been sold publicly. *_7. My compositions have been critiqued in a national publication.
	C	Dance _0. I have no training or recognized talent in this area (Skip to Architecture). _1. I have danced with a recognized dance company. _2. I have choreographed an original dance number. _3. My choreography has been performed publicly. _4. My dance abilities have been critiqued in a local publication. _5. I have choreographed dance professionally. _6. My choreography has been recognized by a local publication. *_7. My choreography has been recognized by a national publication.
	D	Architectural Design _0. I do not have training or recognized talent in this area (Skip to Writing). _1. I have designed an original structure. _2. A structure designed by me has been constructed. _3. I have sold an original architectural design. _4. A structure that I have designed and sold has been built professionally. _5. My architectural design has won an award or awards. _6. My architectural design has been recognized in a local publication. *_7. My architectural design has been recognized in a national publication.
	E	Creative Writing _0. I do not have training or recognized talent in this area (Skip to Humor). _1. I have written an original short work (poem or short story). _2. My work has won an award or prize. _3. I have written an original long work (epic, novel, or play).

		_4. I have sold my work to a publisher. _5. My work has been printed and sold publicly. _6. My work has been reviewed in local publications. *_7. My work has been reviewed in national publications.
	F	Humor _0. I do not have recognized talent in this area (Skip to Inventions). _1. People have often commented on my original sense of humor. _2. I have created jokes that are now regularly repeated by others. _3. I have written jokes for other people. _4. I have written a joke or cartoon that has been published. _5. I have worked as a professional comedian. _6. I have worked as a professional comedy writer. _7. My humor has been recognized in a national publication.
	G	Inventions _0. I do not have recognized talent in this area (Skip to Scientific Discovery). _1. I regularly find novel uses for household objects. _2. I have sketched out an invention and worked on its design flaws. _3. I have created original software for a computer. _4. I have built a prototype of one of my designed inventions. _5. I have sold one of my inventions to people I know. *_6. I have received a patent for one of my inventions. *_7. I have sold one of my inventions to a manufacturing firm.
	H	Scientific Discovery _0. I do not have training or recognized ability in this field (Skip to Theater). _1. I often think about ways that scientific problems could be solved. _2. I have won a prize at a science fair or other local competition.

		_3. I have received a scholarship based on my work in science or medicine. _4. I have been author or coauthor of a study published in a scientific journal. *_5. I have won a national prize in the field of science or medicine. *_6. I have received a grant to pursue my work in science or medicine. _7. My work has been cited by other scientists in national publications.
	I	Theater and Film _0. I do not have training or recognized ability in this field (Skip to Culinary Arts). _1. I have performed in theater or film. _2. My acting abilities have been recognized in a local publication. _3. I have directed or produced a theater or film production. _4. I have won an award or prize for acting in theater or film. _5. I have been paid to act in theater or film. _6. I have been paid to direct a theater or film production. *_7. My theatrical work has been recognized in a national publication.
	J	Culinary Arts _0. I do not have training or experiences in this field. _1. I often experiment with recipes. _2. My recipes have been published in a local cookbook. _3. My recipes have been used in restaurants or other public venues. _4. I have been asked to prepare food for celebrities or dignitaries. _5. My recipes have won a prize or reward. _6. I have received a degree in culinary arts. *_7. My recipes have been published nationally.
	K	Please list other creative achievements not listed above.