The Relationship Between Wellness Behavior Traits and Organizational Citizenship Behavior Traits

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THE RELATIONSHIP BETWEEN WELLNESS BEHAVIOR TRAITS AND
ORGANIZATIONAL CITIZENSHIP BEHAVIOR TRAITS

by

Vicki Yeager Brumfield

Abstract of Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

May 2014
ABSTRACT

THE RELATIONSHIP BETWEEN WELLNESS BEHAVIOR TRAITS AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR TRAITS

by Vicki Yeager Brumfield

May 2014

In difficult economic times a healthy employee that has consistently low absenteeism rates and who volunteers or takes on extra responsibilities at the workplace could be an asset for any business or organization. The personnel component is a significant area of expense for most businesses that includes costs related to salaries, insurance, and training. An effective and efficient employee impacts the morale, productivity, and the fiscal health of a workplace. The aim of the present study was to examine the pattern of relationships between organizational citizenship behavior and employee wellness behaviors. Data sets that consist of a combination of a convenience sample and a snowball sample (N=418) who completed a sixty-nine item instrument were used for analysis in the present study. Exploratory factor analysis was used to reduce data and confirmatory factor analysis was run to test the model fit for the individual instruments and for the theorize model. The results revealed that there is not a relationship between OCB and wellness behaviors. Self-determination theory and conscientiousness personality trait do impact wellness behaviors but not OCBs. According to the results, employees are likely to be motivated to focus on one area of life, such as exercising, and may not have time or the desire to engage in extra responsibilities at the workplace.
RELATIONSHIP OF ORGANIZATIONAL CITIZENSHIP BEHAVIOR TRAITS
AND WELLNESS BEHAVIOR TRAITS

by

Vicki Yeager Brumfield

A Dissertation
Submitted to the Graduate School
of The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Approved:

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Dr. James McGuire

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May 2014
DEDICATION

To Mom, Dad, and Mitch,

Thanks for your continuous support, encouragement, and love.
ACKNOWLEDGMENTS

Victory is much more meaningful when it comes not just from the efforts of one person, but from the joint achievement of many. Success is sweetest when shared (Schultz & Jones Yang, 1997).

The writer would like to thank the people who shared in this dissertation process, which includes dissertation director, Dr. Kyna Shelley, and the other committee members: Dr. Thomas Lipscomb, Dr. James McGuire, and Dr. Richard Mohn. Their advice and support throughout the duration of this project was appreciated.

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CHAPTER I
INTRODUCTION

Background

Media headlines have flooded the public with stories of conditions attributed to the emerging global economy, the upswing in unemployment rates, unstable stock markets, and the unbalanced federal budget. People have been continually reminded of the difficult socioeconomic issues of the current generation. To some degree, every person has been affected by such broad economic changes. Businesses, large and small, have responded to the fallout from the weak economy by downsizing their workforce or by going out of business altogether. Employers and employees have been affected by unemployment rates as high as 9.1% nationally and by marked increases in the price of basic needs such as fuel, food, and clothing (Consumer price index, 2011). Such conditions have placed a strain on personal finances and the ability to care for one’s self and family.

These challenging economic conditions have forced many employed individuals to evaluate and adjust their finances as the cost of living increases but their paychecks do not reflect equal growth. Businesses or organizations that have enacted a hiring freeze may have fewer employees who, in turn, have more responsibilities. Employees have been asked to work longer hours and possibly have less access to supplies required for tasks. More work, longer hours, and little or no additional monetary compensation have been factors that have added to the amplified tension and reduced satisfaction in the workplace (Cascio, 2006).
At the same time, the unemployed have been faced with increased competition in the job market and with fewer opportunities for financial compensation to support their families (Minton-Eversole, 2011). The fallout from the economy has been forcing people to make decisions to limit family activities and drastically alter living arrangements, which can lead to declining physical and emotional well-being. For example, NBC ’s Today Show (September 5, 2011) aired a story about a new trend in response to changing fiscal conditions, in which married couples living apart for economic reasons are called “recession widows.” The term, recession widow, is a name given to spouses who live in different cities because they cannot find work in the same area. Some people are choosing to split the family until their fortunes improve.

Human resource practitioners have been on the front lines of both health related issues and financial issues in the workplace. They have been the people who hire employees and who manage the financial impact of salaries on the organization. They also oversee benefits, such as insurance, monitor employee absenteeism, and plan professional development to increase employee skills and knowledge. Human resource officers have the task of hiring people with the most valuable talents that match the requirements for vacant positions. Current hiring practices for many organizations have limited these officers to choosing a new hire from a resume and short interview. An applicant’s work ethic and health behaviors can be difficult to assess in only a few minutes, but the hiring decision has a huge impact on the effectiveness and efficiency of the organization.
In addition to hiring, human resource personnel handle those employee health-related issues, which can be a financial drain on a business. Poor employee health in turn means increased absenteeism, lowered productivity, increased insurance cost, and higher medical expenses for both the employer and employee. Stress over financial adversities relating to the economy have impacted the employee and the employer physically, mentally, and financially (Cooper & Dewe, 2008). Buck Consultants’ *Working Well: A Global Survey of Health Promotion and Workplace Wellness Strategies* (Wellness survey, 2009) reported that stress was a top health risk for people across the world. Stress is the mind and body’s reaction to perceived stressors and is considered to be a contributing factor to physical and mental illness such as fatigue, depression, cardiovascular disease, diabetes, and infections. Stress, depression, or anxiety has accounted for 13.8 million days lost or 46% of all reported illnesses per year, which combined, are the most prevalent reasons of all absences attributed to work-related illness (Thomas, 2010). Furthermore, Halls and Rhodes (2004) reported that these conditions could lead to increased absenteeism and lost productivity at the workplace. These health conditions also correspond with higher health care cost for individuals and for businesses.

Xu, Kochanek, Murphy, and Tejeda-Vera (2010) reported the leading causes of death in the United States in 2007 were lifestyle factor diseases that included cardiovascular disease, cancer, and stroke. According to the Centers for Disease Control and Prevention (Heart disease behavior, 2009), the primary health behaviors that were precursors to the leading causes of death in America
included the following conditions: being overweight or obese, smoking cigarettes, continuous exposure to secondhand smoke, and/or regular alcohol consumption. Smoking, for instance, is a health-related issue that negatively impacts productivity and absenteeism. Halpern, Shikiar, Rentz, and Khan (2001) stated that lost productive time for a smoker was far greater than for a nonsmoker because smokers were more likely to take breaks during the workday, and they were more inclined to experience serious symptoms of illness. The one pack-a-day-or-more-cigarette smokers have 118% higher medical expenses when compared to nonsmokers (Cascio, 2006). The increased number of breaks and missed days equal less work and less profit for the employer. Alcohol use and issues surrounding obesity have similar effects on the workplace because they both result in higher absenteeism and lost productivity. Grossman (2011) estimated the amount of capital lost per year in the United States due to employee absenteeism was 100 billion dollars.

Employers spend time and resources to hire, train, and provide benefits to their workforce with an expectation that job-related tasks would be completed efficiently and effectively. Some organizations have been using health perks such as onsite gyms and wellness center discounts as benefits for employees, which reflect an investment for the company in promoting better worker health and corporate savings (Thomas, 2010). Buck Consultants (Wellness survey, 2009) reported employers understand the importance of healthier employees and the need to involve them in activities to decrease their health risks. Even in tough economic times, employers have been retaining wellness programs because of the positive impact on the organization.
Because of fiscal pressures, hiring the right person for a job has never been more important than now. A healthy, productive worker is an asset to almost any organization; however, other employee behaviors such as organizational citizenship behaviors (OCB) can have a great impact on the workplace also. People with high levels of OCB traits are productive because they contribute more than is required by their employee contracts. By definition, OCB is individual behavior that is flexible, not formally rewarded, and promotes efficient and effective functioning of the organization (Organ, Podsakoff, & Mackenzie, 2006). People with high levels of OCB contribute to a positive workplace climate and culture, which fosters increased productivity and higher levels of employee morale. OCB behaviors are usually not found on an evaluation rubric but are observed through the analysis of mentoring program participation, workplace committee membership, professional development involvement outside the workplace, and advocates for the organization.

Finding applicants with OCB traits and/or finding applicants with high levels of health and wellness behaviors ease some of the issues for human resource personnel after hiring candidates. Businesses and organizations need employees with positive attitudes and a healthy body to meet the challenges of today’s demanding economic times. An employee’s contribution to the organization’s welfare includes active workplace behaviors but also behaviors that are generally considered personal choices, but which have a tangible effect on the overall wellbeing of the organization.
Statement of the Problem

The correlation between employee wellness behaviors and organizational citizenship behaviors is unknown even though research has shown that individually each variable has the capability of promoting a more effective and efficient workplace. If a relationship is indicated, employers can better understand the characteristics and the needs of employees as they relate to the requirements for creating an efficient, productive, and pleasant corporate culture.

Purpose of the Study

The purpose of this study is to analyze the relationship between levels of organizational citizenship behaviors (OCB) and employee’s positive health behaviors. Both constructs can positively or negatively impact an organization’s productivity. By correlating the levels of employee wellness behaviors to the levels of extra-role work behaviors, evidence has the potential to add to the body of literature concerning the relationship between the two constructs. Organizational leaders can potentially use this information to improve hiring practices, increase organizational productivity, and lower employee related costs.

Research Questions

1. What factors explain the pattern of relationships among exhibited levels of organizational citizenship behaviors (OCB) and exhibited levels of employee wellness behaviors?

2. Do combined components of self-determination theory (SDT) or conscientiousness increase the likelihood of OCB?
3. Do combined components of SDT or conscientiousness increase the likelihood of wellness behaviors?

4. Do specific demographic variables positively relate to the frequency of OCB?

5. Do specific demographic variables positively relate to the frequency of wellness behaviors?

**Definitions**

1. Absenteeism is the number of missed work days reported due to personal illness reported by study respondents.

2. Conscientiousness is defined as being careful, dependable, punctual, and self-disciplined (Organ, 1990) and will be measured by Goldberg’s (2014) International Personality Item Pool (IPIP).

3. Health-related lifestyle factors are personal behaviors, such as weight management, activity levels, tobacco use, and alcohol use, related to the way a person lives (Bronson & Merki, 2007). These factors will be measured by participant’s responses to six researcher created questions that relate to the average amount of alcohol and tobacco used per week, the amount of physical activity completed in a week, and the individual’s height, weight, and metabolic issues because they are combined to calculate body mass index.

4. Organizational citizenship behavior (OCB) is an individual behavior that is discretionary, not directly or explicitly recognized by formal reward, and promotes the efficient and effective functioning of
organization (Organ et al., 2006). OCB will be measured by responses on the Organizational Citizenship Checklist (OCB-C) (Fox & Spector, 2011b).

5. Self Determination Theory basic psychological needs (autonomy, competence, and relatedness) will be measured by The Basic Psychological Needs Scale (Deci & Ryan, 2013).

6. Wellness is total health and is the result of the voluntary commitment of individuals (Bronson & Merki, 2007).

Delimitations

The study focused on correlations among self-reported levels of behavior rather than the cause and effect of those behaviors. The study of legal issues such as EEOC or specific facts concerning workplace lawsuits was beyond the scope of this study.

The majority of the participants for this study were limited to the population in Mississippi. One sample was obtained through a convenience email sampling at a county school district. Another sample was obtained through snowball sampling that was not limited entirely to the South Mississippi region. The researcher began the snowball sample by sending emails to potential participant’s personal email addresses. These participants were asked to continue the study by forwarding the link to other people’s personal email addresses.
Assumptions

The populations in this study have unique skills and characteristics. Educators and snowball sample participants are assumed to have helpful personalities and are familiar with using the Internet. Participants will give self-reported responses to questions on a 69 (convenience sample) or 70 (snowball sample) question instrument.

Justification

Results of this study have the potential to add to the body of literature pertaining to wellness behaviors and OCB. Several studies have looked at the relationship of positive health behaviors and workplace absenteeism (Cooper & Dewe, 2008; Halls & Rhodes, 2004; Hoxsey, 2010; Thomas, 2010), cost related to illness (Cooper & Dewe, 2008; Thomas, 2010), and productivity (Cooper & Dewe, 2008; Thomas, 2010). In addition, several studies have looked at correlations between the work environment and OCB behaviors (Organ et al., 2006). There is little or no literature on the relationship between the levels of OCB behaviors and the levels of employee health behaviors. This study will analyze a possible link between the two areas, potentially increase the body of literature related to the two constructs, and possibly give a basis for future investigations.

Furthermore, depending on the findings of the study, the results can be used by employers in the future to improve hiring practices in pre-employment screenings for predicting the efficiency and productivity of a potential employee.
Furthermore, the results of the pre-employment screening results may give insight into employee absenteeism and potential insurance cost. The results may also help employers choose effective topics for employee training and staff development.
CHAPTER II
LITERATURE REVIEW

Introduction to OCB and Wellness

In the parable of the Good Samaritan, Luke 10:30-37 described several travelers who stepped around a wounded person lying on a roadside before one man showed compassion and assisted the injured man. Each character in the parable made a personal decision about the way he acted toward the injured person. Several travelers chose to disregard the wounded man's dire situation, but one person, the Good Samaritan, had a different perspective and offered assistance. His perspective on the circumstances and his unprompted willingness to take action made a positive impact on the life of another person. This story is an example of one person's selflessness and willingness to advocate for the wellbeing of another person.

The Good Samaritan’s story has been used as a model to teach ethical behavior and to promote mercy toward other people. People make decisions about their behavior in particular environments. Employees, for instance, who have demonstrated organizational citizenship behaviors within an organization, have often been thought of as helpful because they have improved work conditions for coworkers. These individuals provide valuable human capital and can improve workplace morale, which can lead to increased productivity and financial gains for an employer. With difficult economic times in an ever growing global market, employees with high levels of OCBs have been assets because of their contributions to the overall wellbeing of the organization.
Organizational Citizenship Behavior

Organizational citizenship behavior (OCB) is described as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization” (Organ et al., 2006, p. 3). Organ et al. (2006) stated that one helpful behavior of an employee may gain respect of a coworker, but a series of actions, a pattern of behaviors, contributes to more effective functioning of the overall organization. Repeated organizational citizenship behaviors among employees may possibly create a productive chemistry or a feeling of cooperative energy among people in the workplace.

Organizational citizenship behavior (OCB) is a chosen behavior or action of individual employees, much like the Good Samaritan’s actions, that has as its basis, helpfulness to others. Some people will choose to assist coworkers, whether the intent is to make the situation more efficient or effective for a coworker or for themselves, while others will carry on with individual agendas without offering assistance. These altruistic actions can occur in varying degrees and usually extend beyond predictable tasks of formal job responsibilities. Employees with high levels of OCB traits strengthen organizations by creating a positive, productive work environment within organizations.

According to Organ et al. (2006), employees with OCB traits are likely to possess a number of characteristically defined qualities, such as helpfulness, volunteerism, and sportsmanship. These behaviors tend to flourish in environments that have supportive management who use an individual’s
cooperative traits towards community or organizational involvement. Organ et al.’s (2006) OCBs were categorized by various characteristics depending on the actions taken by the individual. As many as 40 dimensions of organizational citizenship behavior have been documented, but selflessness or altruism has been the most consistent trait noted across studies. Every person has the potential for OCB, and these characteristics occur in a variety of sequences and at differing levels of intensity. These actions of helpfulness are intended for an individual or are aimed toward a group of coworkers within the organization.

Such selflessness can be exemplified by a person assisting a coworker(s) in completing a task to avoid future negative consequences. Altruism or helpfulness has subcategories including courtesy, peacemaking, and cheerleading. Organ et al. (2006) described each of the OCB altruistic characteristics in the following ways: courtesy has been related to proactively preventing problems with coworkers such as asking for a coworker’s opinion before announcing schedules to avoid conflict or added stress for others; peacemaking has been described as facilitating mediation between colleagues concerning interpersonal issues; and cheerleading has been associated with encouragement and feedback for coworkers’ accomplishments.

In addition, altruistic behaviors have been the underlying bases that may or may not be combined with other dimensions of organizational citizenship behavior which include, but are not limited to, these behaviors: conscientiousness, loyalty, individual initiative, civic virtue, compliance, sportsmanship, and self-development. Conscientiousness has been connected
to the ability to control one’s behavior and to complete tasks (Conner, Rodgers, & Murray, 2007). These thoughtful employees were well informed about the services and products within the company (Burkhari, 2008) and were advocates through positive communication with others and participation in workplace services. Loyal employees were known for their positive communication skills and for promoting the organization through activities such as mentoring new hires (Organ et al., 2006).

Employees demonstrating civic virtue stay abreast of organizational news and are concerned with the internal working of the company (Borman, Penner, Allen, & Motowidlo, 2001; Burkhari, 2008; Coyne & Ong, 2007; Humphrey, 2012). They promote a positive work environment through their concern for the organization and their enthusiasm to volunteer for committees and additional tasks (Bukhari, 2008). These employees have a tendency to be responsible and to participate in leadership roles that comprise political or administrative practices (Organ et al., 2006). Employees exhibiting individual initiative are creative team players who also volunteer in activities or participate in organizational politics as needed to promote organizational success.

Compliant employees obey organizational rules and procedures and are generally role models for coworkers. Obedient employees also have a lower frequency of absenteeism when compared to coworkers with lower levels of organizational citizenship behavior traits (Coyne and Ong, 2007; Organ et al., 2006). Workers with sportsmanship type behaviors are optimistic and have flexible attitudes when working through difficult situations. They are helpful
because they tend to adjust to organizational changes without complaining (Organ et al., 2006). Employees who show self-development characteristics are likely to participate in classes or staff development activities that increase his or her knowledge base to improve work skills and/or conditions (Organ et al., 2006).

Employees with high levels of OCB improve morale and efficacy with their cooperative spirit which makes a dynamic, cost effective, and productive workplace climate. Their perceptions and/or identification of stressful situations, and willingness to take action to improve these types of circumstances enrich the work environment (Burkhari, 2008). Each person has potential to exhibit the selflessness trait to varying degrees within the different dimensions or characteristics of organizational citizenship behaviors.

Organizational citizenship behavior (OCB) is not an element of a formal job description and is not recognized in a formal evaluation or performance review. For example, if a pharmaceutical salesperson goes above minimal requirements for a sales goal and receives a predetermined bonus for their work, that effort is not considered OCB because the salesperson’s actions would not be spontaneous and he or she would receive a reward for efforts. Organizational citizenship behaviors neither are not essential duties nor are they predetermined. Dissimilar to spontaneous OCBs, an employer could, to some extent, encourage employees’ actions by use of deadlines or status quo for work-related behaviors through a reward or compensation system. Actions of employees in response to feelings or thoughts of pressure or intimidation from others to perform in a
particular way are not characteristic of OCBs. Furthermore, actions taken with the expectations of praise and accolades are associated with controlled behaviors and are not considered OCB (Sheldon, Ryan, Deci, & Kasser, 2004).

The issues of spontaneous actions versus a formal reward for actions set organizational citizenship behaviors apart from other behavior frameworks. Organ et al. (2006) and Ryan and Deci (2000) broke down several OCB related frameworks and outlined the similarities and differences of each. One such framework compared the topic of task-performance and contextual-performance to OCB. Task-performance relates to a certain amount of skill needed to perform actions and tends to occur when prompted by organizational leadership demands, deadlines, and peer pressure, which is not characteristically OCB. Contextual performance is more in alignment with OCB and is described as interpersonal facilitation or job dedication. Organ et al. (2006) predicted that OCB and contextual-performance will tend to happen in times of low demand and of low levels of stress to complete a task. There are similarities between OCB and contextual performance with the exception of the formal reward for efforts. In addition, prosocial behavior is another framework that is similar in definition to OCB traits, but it, too, lacks agreement concerning a formal reward associated with cooperative behaviors and behaviors that went beyond the job description.

Wellness

In a challenging economy, employees who display OCB traits are beneficial to the emotional climate and are valued human capital of an organization (Coyne & Ong, 2007; Ilies, Fulmer, Spitzmuller, & Johnson, 2009).
Likewise, a person who has energy to meet work demands and who adjusts to the stressors of the day are also considered valued human capital for an organization. A healthy, energetic employee is an asset to the organization because of his or her potential for higher productivity and lower costs related to absenteeism and lost time at work due to injury and/or illness.

Health is defined as a quality of life that includes social, emotional, mental, spiritual, and physical dimensions (Donatelle, 2012). The more balance a person has among and within these areas, the better that person adapts to his or her environment. The term wellness is used to distinguish between high and low levels of health in each dimension and is used mutually with the word health.

The different dimensions of health operate in balance to produce high levels of wellness. Physical health refers to the way the body functions, moves, and repairs itself (Donatelle, 2012). Intellectual health relates to the way a person learns, solves problems, and takes responsibility for actions, whereas emotional health is linked to expressing emotions such as trust or love (Donatelle, 2012). The emotional dimension is also related to self-esteem and self-confidence (Donatelle, 2012). Social health is the measure of how well a person gets along with others and how well they relate to family, friends, and coworkers (Bronson & Merki, 2007). Environmental health is the measure of the safety a person has in his or her surroundings (Donatelle, 2012). Finally, spiritual health is expressed by the meaning and/or a purpose a person has in life (Donatelle, 2012). Altruism is a major component of spiritual health and was described by Donatelle (2012, p. 69) as “giving oneself out of genuine concern or others.”
Wellness is measured several ways within each of the areas of physical, intellectual, environmental, spiritual, emotional, and social health. One way to measure total health of a population is to examine life expectancy of that population. Life expectancy is an average number of years a person is expected to live based on age-specific death rates. The Centers for Disease Control and Prevention’s (CDC) *Healthy People 2010 Final Review: Executive Summary* reported that life expectancy in the United States has improved in the past decade (Heart disease behaviors, 2012). The CDC (*Healthy people 2010*, 2010) reported the average life expectancy for a person in the United States is 78.7 years with heart disease and cancer being the leading causes of death.

The combination of heart disease, strokes, cancer, and diabetes account for nearly two out of three deaths in the United States each year with direct and indirect costs of these diseases being estimated at 700 billion dollars annually (Lloyd-Jones et al., 2010a). The Centers for Disease Control and Prevention (Heart healthy behavior, 2012) reported that lifestyle factors were the major contributors to death in the United States. Lifestyle factors such as inactivity, obesity, tobacco use, and excessive alcohol use, are personal choices made on a daily basis that can promote better health or cause harm to a person’s body. Because these behaviors are personal choices, people use their varying levels of autonomy and varying levels of knowledge and skill to make the best choices for optimal health.

Not only does a person demonstrating healthy physical, intellectual, emotional, spiritual, environmental, and social behaviors in theory reduce his or
her risk for ailments such as heart disease and cancer, this healthy employee may reduce the cost of medical care and lost time for employers. As a way of promoting wellness, the American Heart Association, American Diabetes Association, and American Cancer Society (Heart healthy behavior, 2012) recommend 30 minutes of continuous exercise five or more times a week to reduce the risk of disease and to increase endorphin levels to promote mental health. Employees, who exercised, for example, by walking 1.5 miles a week, saved 114% on insurance claims, and employees who maintained a healthy body weight had an 11% reduction in medical claims when compared to obese coworkers (Cascio, 2006).

The United States Department of Agriculture and Department of Health and Human Services Dietary Guidelines for Americans (2010) reports that a balanced diet that limits oil and sugar intake and encourages nutrient-rich food choices, such as fruits and vegetables, improves body functioning and contributes to maintaining a healthy body weight. A healthy body weight and regulated glucose level decreases incidences of diabetes and heart disease while improving energy levels to complete daily tasks.

Inactivity and unhealthy dietary habits are linked to obesity, which is often compared to tobacco use as a preventable cause of premature death. Mehta and Chang (2009) conducted a longitudinal study (1992 to 2004) of the correlation of BMI (body mass index) with mortality rates in mid-aged adults (age 50-61). BMI is determined by multiplying body weight (pounds) by 703, and then dividing that answer by height (inches), and finally, dividing that sum by height
BMI has been categorized by World Health Organization and National Institutes for Health as follows: normal or healthy BMI, 18.5 - 24.9 and obese BMI, 25.0 – 35.0> (3 levels of obesity in the range). A BMI over 40 has been considered morbidly obese. Their research concluded that obesity and smoking did contribute to poor health and to excessive death rates for the study participants.

In addition, drug use, such as tobacco and excessive amounts of alcohol, are major contributors to detrimental health conditions. The American Heart Association, American Diabetes Association, and American Cancer Society (Lloyd-Jones et al., 2010a) has suggested avoiding all types of exposure to tobacco, including smoking, dipping tobacco, and secondhand smoke, to reduce a person’s risk of heart disease, cancer, and stroke. Tobacco, like obesity, is linked to many poor health conditions and is known to be a preventable cause of death because a person can choose whether or not to consume the product.

The effects of tobacco use are widespread in many areas of the world, not just in the United States. For example, Le Houezec, McNeill, and Britton (2011) reported that smoking has contributed to approximately 730,000 deaths in Europe annually.

Unlike tobacco use, which is unhealthy in any amount, there is a debate concerning safe and unsafe amounts of alcohol intake for men and women. For instance, the British Nutrition Foundation (Foster & Marriott, 2006) reported guidelines for drinking alcohol ‘sensibly’ as outlined by UK government as 24 - 32g a day or less for adult men and 16 - 24g a day or less for adult females. In
Dietary Guidelines for Americans (Dietary guidelines for Americans, 2010) the USDA and DHH defined heavy drinking as more than two drinks per day for men and more than one drink per day for women. Furthermore, research has reported that alcohol, even in amounts as small as one to three drinks a day, can amplify the negative effects on cardiovascular health, cancer formation, and increased glucose levels associated with Type 2 diabetes (Foster & Marriott, 2006). Even though a safe amount of alcohol use has been defined by some researchers, The Centers of Disease Control (Healthy people 2010, 2010) list alcohol use as a leading contributor to obesity, cardiovascular disease, and cancer.

Daily lifestyle choices about physical activity, diet, and tobacco/drug use are decisions made each day, which over time influences a person's overall wellbeing, quality of life, and longevity. Many factors such as an individual's ability, health literacy, resources, and social support influence the likelihood of that person's making positive health related choices. These choices, whether positively or negatively, impact both the individual and his or her work place.

In contrast to the healthy employee is the individual who misses work or simply one who lacks energy and creates more responsibilities for coworkers because of reduced efficiency. Sick or injured employees negatively impact the workplace through lost productivity, as much as 255 dollars per individual per year (Cascio, 2006). Presenteeism is the term that refers to employees who show up for work but are ill and less productive than usual. The illness may stem from conditions such as sniffles from the common cold, to sluggishness from a
hangover, to chronic pain from arthritis. Presenteeism costs United States businesses 180 billion dollars per year (Cascio, 2006).

Theoretical Foundation

The effort applied toward wellness goals and toward OCB actions relies on a person’s ability, motivation, and opportunity. Organ et al. (2006) stated that “Motivation determines how hard an employee will try to engage in the behavior and the combination of abilities and opportunities determine whether the employee can exhibit the behavior” (p. 93). Self-determination theory is an example of a motivational theory that has been used to explain such behaviors. Self-determination theory distinguishes between types of motivation connected to abilities and valued outcomes at work and for personal health/wellness.

Deci’s self-determination theory (SDT) explains the reasons behind motivations and certain behaviors, particularly autonomous and controlled behaviors (Gagné & Deci, 2005). Intrinsic/autonomous, extrinsic/controlled, and amotivational are the three overarching types of behavior motivation outlined in SDT (Deci, 1971). The theory describes the effects of each type of motivation on behaviors with valued outcomes or goals. This emphasis on the valued outcome is comparable to other theories, such as expectancy theory and health belief model. Gagné and Deci (2005) stated the key difference between SDT and other work-related theories is that self-determination theory revolves around the strength of autonomous (intrinsic) versus controlled (extrinsic) motivation, not the collective amount of motivation.
Autonomous behaviors are acted out because of the pleasure or fun of the activity; on the other hand, controlled motivation is associated with pressure to act in a certain way. Autonomous motivation is determined by the amount of autonomy, competence, and relatedness an individual believes they possess. Deci and Ryan (2000) define autonomy as a choice in behavior; competence as the ability to complete a task successfully; and relatedness as connections with others.

Self-determination theory (SDT) is used to understand behavioral commitment and consistent actions in fields such as health care, education, and industry. SDT practitioners examine the factors that strengthen motivation and ways in which direction or goals fulfill a person’s basic psychological needs. These three innate psychological needs, autonomy, competence, and relatedness, drive motivation. The more these three needs are met, the more likely a person is able to exhibit internal motivation or effort and cultivate directed actions to grow and maintain well-being in all areas of life.

SDT is grounded in the level of autonomy associated with an individual’s motivation for particular behaviors and the effort a person exerts to obtain goals. A SDT continuum is often used to show the varying levels of autonomy and the behavior, motivation, and regulatory style associated with each level (see Figure 1). First on the behavior continuum is intrinsic motivation. Intrinsic motivation is one extreme of the regulatory continuum and is described as a performance or an effort based on interest of the activity itself and autonomy.
Deci (1971) explained that intrinsically motivated behaviors or actions are completed when a person has independence in decision making. To test this idea, Sheldon et al. (2004) examined three studies. Data from the three studies were used to analyze the new data comparing intrinsic contrasted with extrinsic motivations of the subjects toward goals of personal well-being. The results were consistent with previous research in the area that concluded extrinsic goals, such as wealth, fame, and popularity, are associated with reduced well-being. They also found that intrinsic goals, namely close relationships, personal growth, and community involvement, contributed to increased well-being (Sheldon et al., 2004).

In addition, McLachlan and Hagger (2011) examined whether people distinguished between intrinsic goals and extrinsic goals. The results of their two studies showed that the majority of participants consistently distinguished between extrinsic and intrinsic health related goals. This information is useful in...
predicting behavior as it relates to goals and/or valued outcomes in programs
used to promote wellness and organizational citizenship behaviors (OCB).

Second on the SDT continuum is extrinsic motivation. Extrinsic motivation
is located between the intrinsic and amotivational sections of the continuum.
Deci and Ryan (2000) identified four levels of extrinsic motivation in SDT that are
associated with varying levels of regulatory styles. These levels include
integrated regulation, identified regulation, interjected regulation, and external
regulation.

Integrated regulation is external but has a high level of self-determination.
This person’s actions seem to be intrinsically motivated because he or she
values the outcome and feels less pressure from others to take action. Even
when the external reward is apparent, the person internalizes the task and
completes unpleasant or uninteresting jobs (Deci & Ryan, 2000).

Identified motivation is external and somewhat internally regulated.
Although a person with this type of motivation may feel the outcome or goal is
important, he or she does not necessarily enjoy the activity. This type of
motivation in SDT, though activities are not in themselves enjoyable to the
person, is the reason for an individual to make decisions to act depending on the
situation.

Individuals need internalization to regulate extrinsically motivated activities
necessary to function in society. Identified motivation and integrated motivation
are extrinsic, but if the activity or task supports personal values or avoids
negative results, the motivation becomes more self-directed and internalized.
For example, a teacher does not necessarily enjoy some of the requirements for his or her job, but if the unpleasant task means the students receive proper instruction, the task becomes valued and is a need for internalized satisfaction and positive outcome.

Interjected motivation is described as moderately controlled and somewhat external. This level or type of motivation is based on a person’s need to avoid guilt or shame and to improve self-esteem. Interjected motivation stems from a desire for approval and feelings of control from within a person’s thoughts and/or perceptions of him or herself and are a driving force in action or behaviors (Deci & Ryan, 2000). Situations, for example, in which a person is motivated to attend physical therapy because of a doctor’s orders or to avoid the recriminations for failing to meet a deadline from an angry boss, demonstrates interjected motivation in that the individual does not have autonomy in the decision and received motivation from an external source.

On the opposite side of the spectrum from integrated regulation is external regulation that is highly controlled. External motivation is conditional, based on rewards or punishment such as getting a raise or pleasing the boss. This type of motivation requires a type of tangible, expected reward, such as verbal praise, popularity, or monetary compensation, for effort or participation in an activity. Interjected and external regulation tends to correlate with negative outcomes (Tremblay, Blanchard, Taylor, Pelletier, & Villeneuve, 2009).

Third and the opposite extreme of intrinsic regulation on the self-determination theory (SDT) continuum is amotivation. Amotivation simply means
a person does not have value or reason for a task. Effort is low if actions are controlled, if perceived skills are inadequate for task, if outcome is not important, or if individual does not want to act (Ryan, Williams, Patrick, & Deci, 2009).

Self-determination theory’s limitations include the possibility that personal intrinsic values may not align with workplace values and that people may be intrinsically motivated toward destructive goals or counterproductive work behaviors (Fox & Spector, 2011a). A person may feel pressure to perform tasks that are not legal, such as alter financial reports, to please an organizational leader or to meet a deadline.

Motivation, OCB, and Wellness Behavior

People make behavior choices that reflect the way they are influenced by their motivation and valued outcome. People who make efforts to engage in more productive behaviors at work and/or in their physical performance are enhanced as the intrinsic and extrinsic motivators align with personal goals and with psychological needs (Grant & Shin, 2011). Motive, which in Latin means to move, has been described by researchers and health experts as a powerful tool in rousing an individual to take action (Dunsmore & Goodson, 2006).

The outcomes of both organizational citizenship behaviors (OCB) and wellness behaviors are more likely to be successful and to become self-reinforcing behaviors if people are intrinsically motivated to engage in these behaviors. Organ et al. (2006) stated that “motivation will determine how hard an employee will try to engage in OCB behavior…” (p. 93). This engagement occurs for personal reasons, for the sake of others (coworkers or leaders), and/or
for the overall organization. Employees may have also felt some obligation to engage in the behaviors because of thoughts of personal responsibility, of social norms, or of feelings of moral obligation (Organ et al., 2006). Similar reasons may hold true for making positive health choices: if a person is highly motivated to reduce complications from heart disease, for example, he or she participates in regular exercise, abstains from smoking, limits alcohol intake, and controls weight. Both OCB and wellness constructs require self-determined actions, skills, and support from others to fulfill the basic psychological needs of SDT. In addition, the greater the value a person places on the outcome, the more effort he or she uses to achieve the goal (Mitchell, 1973).

If a person finds pleasure or interest in actions related to OCB and to wellness or if the person finds value in the outcome, this person acts willingly, and in theory, tries harder to work toward a goal. People who show characteristics of organizational citizenship behavior and who choose healthy behaviors tend to be intrinsically or internally motivated and take action to fulfill the basic psychological needs of autonomy, competence, and relatedness (Gagné & Deci, 2005). Both behaviors have a positive impact on personal self-esteem; they also positively impact the social environment and financial strength of the workplace (Ilies et al., 2009). If motivation is autonomous, personal responsibility for improving athletic performance and healthy lifestyle choices increases. Personal realization of accomplishments such as improved strength and/or muscle tone increases the determination for repeated exercise
participation. Furthermore, unanticipated positive praise from coworkers or a boss increases the repetition of helpful actions towards others.

According to SDT, people who are driven by intrinsic or integrated motivation may be less inspired to act if a formal reward is attached to the outcome. This is central to organizational citizenship behaviors which are not recognized by a formal reward system and to health behaviors which are not always recognized by a formal reward system. Lack of a formal reward system does not mean that a person with organizational citizenship behaviors traits does not receive valued outcomes or that a health conscious person does not reach goals. The reward, per se, is in the pleasure or internalized value the individual placed on reaching an outcome (Deci & Ryan, 2000). For example, if a worker is proactive in scheduling coworkers’ assignments and can avoid conflict by volunteering for extra assignments themselves, this person finds personal pleasure in the work even with the addition of extra responsibility. Volunteering is self-directed and intrinsically motivated behavior that satisfies basic psychological needs. Moreover, if an individual believes exercise improves heart health by working out five days a week, he or she will possibly be rewarded by not having to take medication for high blood pressure or high cholesterol. This person has control over the choice of exercising or of taking medication; the actions are intrinsically motivated and satisfy basic psychological needs (Deci, 1971).

Proponents of self-determination theory (SDT) state that when a behavior is rewarded, the individual feels a loss of autonomy or control over the actions.
Merit pay, for instance, a practice adopted by organizations as a way to improve positive motivation and increase productivity, many times, will counter-intuitively, have the opposite effect (Pink, 2009). The employee might believe that the pay is an unfair manipulation of power and become less motivated. Autonomous behaviors flourish in environments of trust and fairness; thus, employers and/or leadership teams can promote more positive behaviors depending on their decisions toward organizational policy and their understanding of motivation (Pink, 2009).

Organ et al. (2006) stated that OCBs were supported by a combination of motives, which may include egocentric or non-egocentric reasons. In light of SDT, OCB may be driven by autonomous motivation and may fulfill basic psychological needs of autonomy, competence, and relatedness. For example, if employees value mentoring a new hire (relatedness/outcome), are knowledgeable and conscientious (ability), and have an opportunity (self-determined/supportive environment), they will more likely be motivated to assist and to learn the skills needed to complete work tasks effectively. He or she has interest and feels a responsibility to help a coworker, which in turn, is likely to improve organizational productivity and morale. Positive feedback given to the mentor from the mentee or management for taking on extra responsibility of training may increase the pleasure and ownership of the actions. According to Gagné (2003), evidence indicates that autonomous motivation promotes altruistic, civic virtue, and prosocial behaviors especially in situations with supportive leadership. One study (Gagné, 2003) showed that when parents
encouraged their child’s autonomy, college students were more likely to volunteer in the community and to participate in blood donation.

Research linking health behaviors with self-determination theory is more prevalent in literature than work-related OCB research. Reis, Sheldon, Gable, Roscoe, & Ryan (1999), for example, investigated the idea of personal wellbeing as being a function of the three psychological needs outlined by Deci and Ryan (2000) which included autonomy, competence, and relatedness. These needs were often referred to as nutrients essential to an individual’s growth, integrity, and health. Furthermore, motivation pertaining to wellness was anchored in the intellectual and emotional dimensions of health. Healthy behaviors, such as exercise or healthy food choices that are pleasurable, increase the likelihood of a person repeating actions over time and place value on health goal outcomes that are extensions of his or her self-expression. When a person chooses to participate in exercise or sports that he or she enjoys (autonomy/outcome), is conscientious, is confident in skills (competence/ability), and has a social network to support goals (relatedness), he or she is more likely to be motivated to exercise regularly.

In a two week study that examined daily variations in attitudes toward the amount of autonomy and amount of competency compared to wellness, Deci and Ryan (2000) explained that fluctuations in psychological needs caused fluctuations of wellness needs. For example, to make the choice to quit smoking can be a physically and mentally difficult experience, but if a new baby is expected, theoretically, the soon-to-be parent will value the change
(autonomy/outcome) and put forth effort to stop smoking (competence) for the sake of the infant’s health (outcome). If the new parent has a desire to provide the best care possible to the infant and values the baby’s health, the parent’s motivation is integrated. For many people, external feedback (relatedness) is needed to support a successful cessation from cigarette smoking. This support comes from family, coworkers, and/or medical practitioners. A positive health report concerning the new baby or the desired completion of the personal goal of being a smoke-free parent can also be reinforcing intrinsic factors in the drive to remain smoke free.

Hagger and Chatzisarantis (2008) stated that traditionally, people seldom participate in health related behavior due to autonomy alone; they usually had a valued goal or outcome for the integrated motivation for exercise behaviors. Silva et al. (2010) designed a study that utilized SDT and the need for autonomous motivation in intervention programs to increase participant success. They randomly selected 239 study participants for a year-long treatment period for a physical fitness and weight control program and a two year follow up period with no intervention. The study’s control group received 29 sessions of meetings in which goal setting and explanations were minimal whereas the experimental group members attended 30 meetings that included a supportive environment and motivational educational guidance. The second group showed more significant weight loss and increased participation in physical fitness activities when compared to the control group. Intervention group participants reported feeling they had choices and greater self-awareness. Lewis and Sutton (2011)
recruited 100 participants, 50 men and 50 women, from a university gym to complete questionnaires related to the *Big Five* personality traits, behavioral regulation, and frequency of exercise. The results were correlated to the Deci and Ryan’s (2000) regulation sub-scale by showing a decrease in exercise frequency as motives became less intrinsic.

According to Ryan, LaGuardia, and Rawsthorne (2005), people deal with the stressors of life and with avoidance of negative events through truthful reflection of self and autonomy in all of life’s roles. Personal time for participation in enjoyable activities, such as exercise or community involvement, is important for improving one’s overall physical, mental, and social health. Strong mental and emotional health can help one meet the demands of the day and have confidence to face challenges (Ryan et al., 2005).

**Competence, Relatedness, and OCB**

If motivation plays a role in the effort a person applies to engaging in a behavior, then “the combination of ability and opportunity determine whether the employee can exhibit the behavior” (Organ et al., 2006, p. 93). In addition to autonomy, an individual needs adequate skills and a reassuring environment for the opportunity to exhibit OCB and/or wellness behaviors. Competence is the second psychological need according to SDT. Humans have an innate need to make decisions that direct their futures, to be creative, and to make the world a better place (Pink, 2009). This characteristic flourishes in supportive environments with personal connections, trust, and fairness, and this success leads to added competence and opportunity. When a person feels he or she has
ability or perceived ability to reach a goal, he or she will take action to attain the valued outcome.

Competence fulfills the need to interact in one's social environment in a way that improves relatedness, which also helps produce a valued outcome and/or to prevent an undesired consequence. People who exhibit OCB behaviors may choose to act a certain way because of the need to prevent an unfavorable outcome, just as a person who exhibits wellness behaviors can take action to prevent a negative result. They take action in anticipation of a positive result. Adequate abilities, such as competent communication skills, are needed for action because motivation will be hindered if a person’s perceived skill level is insufficient for the task. For example, if a person consults a nutritionist to develop a diet plan for weight loss, the individual must be able to tell specific likes and dislikes of food items. If food preferences are not clear, the diet plan will not be easily adapted for daily use. Just like a work, if an employee receives training on a piece of equipment but does not ask questions to clarify misunderstandings, the employee’s coworkers will see inadequate skill level for job requirements. The individual’s frustration that might develop from the inadequacy can decrease a person’s desire to continue participation in task or goal.

Relatedness is the third psychological need described in SDT and can be a factor in OCB and wellness behaviors. Relatedness is the social interaction with others, which encourages opportunity for positive behaviors. Connections with other people are crucial for internalizing the value for the behaviors, which
satisfy a person’s need for autonomy (Gagné & Deci, 2005). Success in learning a skill or technique, strongly correlated to high levels of relatedness (Hagger & Chatzisarantis, 2008), is a factor in the maintenance of intrinsic regulation (Deci & Ryan, 2000).

Supportive environments can increase enjoyment and promote risk-taking toward reaching goals, which in turn, increase one’s ability to complete more difficult tasks or desire to reach for higher goals. By helping a coworker learn a new task, the mentor may feel that extra help in the present time will make his/her work less strenuous later (Organ et al., 2006). The coworker may pay back the favor at a later date. The particular skills needed differ with each OCB characteristic, but communication skills are necessary for all the behaviors to occur (Organ et al., 2006).

OCB, which requires interactions an individual or a group of coworkers, parallels relatedness, which involves feelings of being connected and understanding by important people in one’s lives. Since OCB requires some level of relatedness, they both provide opportunities to behave in positive ways towards others, to have confidence in skills, and to have confidence in helping beyond the scope of a job description. Humans have innate needs for close relationships, friendships, interactions with others, and community involvement – people have a need to feel valued, to be understood, and to belong (Bronson & Merki, 2007). People want the privilege to make choices in daily life and to be respected for those choices by people with whom they feel connected.
These behaviors may increase feelings of confidence in competence, relatedness, and autonomy.

Management or leadership teams that maintain trusted environments and have a reputation of fairness are more likely to experience high levels of employee OCBs in workplace. Fabes, Fultz, Eisenberg, May-Plumlee, Christopher, (1989) and Kunda and Schwartz (1983) showed evidence that conditions to the contrary decreased autonomous motivation and positive behaviors. Both studies examined the practice of giving rewards for targeted behaviors, and both found that rewards can diminish helping behaviors. When applying SDT to OCB principles in situations in which motivation may be intrinsic or a variation of extrinsic regulation, the spontaneous actions are more likely to be autonomously motivated if the outcome has a conclusion that includes an unplanned reward.

Competence, Relatedness, and Wellness

Wellness is an ever-changing process of working for a balance of physical, mental, emotional, environmental, spiritual, and social health (Donatelle, 2012). Physical health equals energy to complete daily tasks and to make positive decisions about one body, for instance, avoiding harmful substances. Humans have an inherent tendency to learn, to explore, and to understand (Pink, 2009). People also need challenges to continue personal growth toward self-actualization.

People who regularly exercise have some level of skills for the activity and self-confidence that they can complete the desired actions. As they participate in
activities and continue to develop and perfect skills, they will be more willing to try new challenges and/or activities (Donatelle, 2012). Physical fitness, for example, obviously has physical aspects, but it also incorporates mental aspects and relatedness. Time for physical activity, location of exercise equipment, and support from others are needed to promote training consistently. People will be more consistent with workouts if they have a workout buddy, a person depending on them to join him or her for exercise class. People who exercise together have shared experiences, which can build camaraderie (Podlog & Dionigi, 2009). A gym or workout center is a place to enjoy fellowship with others with similar goals and or interests. Regular exercisers report feelings of increased autonomy, better health, positive relationships with others, and increased personal growth (Edwards, Ngcobo, Edwards, & Palavar, 2005). They also report a feeling of wellbeing that includes components such as coping and stress management (Edwards, 2006).

Relatedness helps to satisfy a person’s need for personal growth and, in some situations, such as participating in a charity 5K event, a need for community involvement. Conversely, Wilson, Longley, Muon, Rodgers, and Murray (2006) conducted two studies investigating the psychological needs of SDT and exercise. The authors found greater satisfaction with perceived autonomy and competence as related to wellness, but relatedness was not the strongest factor. Researchers speculated that relatedness may be a stronger factor in satisfaction during various stages of exercise participation.
Much like exercising, maintaining a healthy diet also encompasses physical, mental, and social aspects of behavior. Physical skills are needed to prepare the foods, to read nutritional information on food labels, and to measure adequate amounts/portions for body weight. The mental aspect of eating a healthy diet includes understanding caloric intake and metabolism, portion control to maintain a healthy weight, and nutritious choices (Donatelle, 2012). Social aspects of a healthy diet include skills to communicate needs and to engage the support of family and friends. Weight Watchers (Weight watchers, 2013), for example, has meetings to teach healthy diet skills, group support and guidance, and accountability for members' behaviors and progress. Autonomy, competence, and relatedness can work in an integrated way to promote a person's success, but some health-related programs rely more heavily on one than other.

Also related to SDT, health intervention curricula that teach skills and promote intrinsic motivation have shown higher participant success rates than programs that lack instruction in these areas (Williams et al., 2002). One important component in SDT based smoking cessation and improved diet study was competence (Williams et al., 2006). In this study, intervention specialists promoted skills that participants needed to cope with the stressors associated with changing health behavior so they included coping skill development as a part of the program. The participants learned about cues that signal the onsets of urges to binge eat or to smoke. The participants learned these skills in order to have the abilities they needed to stay focused on their goals. Williams et al.
Conscientiousness

Conscientiousness is a personality trait that is described much like the organizational citizenship behavior (OCB) competence dimension that includes the following characteristics: careful, dependable, punctual, neat, and self-disciplined behaviors (Organ, 1990). McCrae and Costa (1987) reported two dimensions of performance in the Big Five framework of personality: agreeableness and conscientiousness, which correlated with OCBs. Agreeableness includes friendliness and congeniality, which can be related to the OCB dimensions of helpfulness, courtesy, and sportsmanship. Conscientiousness is described as dependability, self-discipline, achievement-oriented, and perseverance, which falls into the OCB dimension of civic virtue. Conscientiousness is the domain associated with good attendance and rule adherence. Organ and Ryan (1995) have established that agreeableness and conscientiousness can predict the likelihood that a person will exhibit OCBs. In addition, Singh and Singh (2009) found that conscientiousness correlated positively with all aspects of OCBs except for altruism. Lapierre and Hackett (2007) reported that there is a positive correlation between OCB and job satisfaction, which, in turn, means better relationships between organizational leaders and workers (Organ, 1994).
Organ (1990) summarized the connections of conscientious and agreeableness personality traits from McCrae and Costa’s five factor model with the traits of OCBs. The conscientious trait was closely defined as the competency aspect of OCB, but Organ suggested more research would be necessary to conclude that conscientiousness is an underlying trait that could be used to predict the likelihood that a person would express OCBs in the workplace.

In a more recent study, Illies et al. (2009) conducted a moderator meta-analysis which found a relationship among people with high levels of OCB type personality and job satisfaction. Findings indicated that personality traits and performance were based on motivation, but job satisfaction influenced OCBs through social interaction (Chiaburu, Oh, Berry, Li, & Gardner, 2011).

Results of a similar meta-analysis showed that conscientiousness is a personality trait that has a relationship with health traits such as lower likelihood of drug use, unhealthy eating, and tobacco use (Bogg & Roberts, 2004). Furthermore, Conner et al. (2007) conducted a study examining university students’ exercise behaviors during a semester. Students completed Big Five Personality questionnaires and kept records of their exercise schedules during the semester. Data revealed that the conscientiousness personality trait significantly influenced exercise behaviors during unusually busy or stressful weeks, such as midterms or final exams. The researchers theorized that individuals with high conscientiousness personality traits may be able to cope with barriers that could prevent people with lower levels of the conscientious
traits from exercising. Lewis and Sutton (2011) studied the personality traits of 100 participants through the Big Five questionnaire completion and found similar results to Conner et al. (2007). Conscientiousness, however, did not correlate to exercise frequency during normal activity schedules. Therefore, Lewis and Sutton (2011) speculated that the variable of an abnormal activity schedule could have influenced previous study results. Lewis and Sutton (2011) also suggested that the increase of autonomous motivation correlated with frequency of exercise participation.

Conner, Rogers, and Murray (2007) described conscientious individuals as more structured, careful, reliable, and accomplished much like Organ et al. (2006) characterized a dimension of OCB. Conscientiousness may be a factor in the ability or self-confidence to act on desires to help others at work or to try new activities such as a new sport to improve health. This personality trait may also be a factor in stress management, a skill which can improve all areas of wellness.

O’Conner et al. (2009) conducted a study focused on stressors and health behaviors in which 466 participants completed a pre and post questionnaire and completed a seven day food diary. Study results showed an increase in health behaviors like eating snacks low in saturated fats, but the results also showed a higher caffeine intake and an increase in smoking. A possible factor could lie in the fact that smokers tended to score lower on the Big Five’s dimensions of agreeableness and conscientiousness when compared to people who never
smoked (Terracciano & Costa, 2004). O’Connor et al. (2009) also suggested that conscientiousness could aid in handling minor, everyday stresses. Conscientiousness is a trait that is reported to be a variable that increases the likelihood of OCBs (Burkhari, 2008; Ilies et al., 2009) and wellness behaviors (Madhavan, 2004). A high level of conscientiousness may predict a high probability of repeated OCB behaviors and adherence to wellness behaviors so valued goals can be achieved.

Opportunity

Organ et al. (2006) stated that not only are motivation and skills needed for behaviors to occur, but a person also needs the opportunity. Organizational leaders can promote an environment that contributes to workers’ innate psychological needs, which, consequentially, can create circumstances favorable for desirable behaviors and higher productivity. Employers want dependable, healthy employees who are efficient, productive, and devoted to the organization. Humans seek environments that encourage their self-determination, skills, and goals. Environments that support autonomous behavior aid in the internalization of extrinsic motivation, which in turn can produce valued cost-effective outcomes (Gagné & Deci, 2005).

Organizational leaders can employ a combination of integrated extrinsic and intrinsic rewards to increase workers’ efforts. Increased opportunities for varied responsibilities and challenging tasks can also increase intrinsic motivation through satisfaction of the needs for autonomy, competence, and relatedness (Porter & Lawler, 1968).
Organizational leaders can be proactive in the development of a supportive environment for OCBs. In a 2005 study, leaders who communicated a vision for that organization, encouraged an environment that supported some level of self-determination, provided opportunity for personal growth and skill knowledge for employees, and increased cooperative behaviors and morale, also increased productivity (Gagné & Deci, 2005). Leaders who model helping behaviors towards their employees and who clarify roles and expectations of workers will decrease role uncertainty and build trust. Employees are more trusting and will work harder for a leader who they perceive to be fair concerning rewards and punishment. Leaders can encourage autonomy by providing choices and listening to suggestions from employees.

Transformational leadership, as noted by Organ et al. (2006), enhances the opportunity for OCB by setting expectations or a vision that is accepted and valued by workers. This type of leader encourages the staff to take ownership of the performance goals, thereby gaining buy-in from the staff to reach performance goals. A leader who can draw from autonomous motivation can improve workplace environment because employees feel ownership and responsibility for task completion and will perform tasks to complete goals. When completing autonomous tasks, employees will have higher levels of persistence and performance. If the work is meaningful, such as a goal arising from a shared vision among management and workers, and the workers have fair feedback on their accomplishments, employees will feel satisfaction with their jobs. Employees with higher levels of job satisfaction and higher levels of OCB traits
translates to lower turnover rates when compared to employees with lower levels of OCB (Cascio, 2006; Coyne & Ong, 2007). Lower turnover rates in a workforce are cost-efficient for the organization.

In a study by Burstyn, Jonasi, and Wild (2010) 45 Canadian safety inspectors completed a survey to determine whether they had an autonomy-supportive or coercive style of personality. The researchers also compared workplace reports and compliance orders to personality style and found that autonomy-supportive inspectors wrote fewer severe compliance reports than coercive inspectors. Reports also showed that autonomy-supportive inspectors used conflicts at workplaces as opportunities to reinforce proper safety compliance. Furthermore, the autonomy-supportive inspectors required fewer follow up visits to complete inspections and resolve conflicts, which in turn, saved time, money, and resources for the inspectors. Autonomy-supportive inspectors reached goals through autonomy (the companies in question some decision rights), competency (skill development), and relatedness (two parties or community work toward a unified outcome).

Furthermore, human resource personnel are likely to prefer to hire those employees who show characteristics of helpfulness and conscientiousness in order to improve the likelihood of a positive, productive work environment. This approach has limitations because of the difficulty in assessing applicants in a short interview, and research has not identified characteristics or methods that produce valid and reliable results.
Wellness and Opportunity

Many organizations measure a healthy workplace culture by health care costs, absentee rates, turnover rates, and the amount of workman’s compensation (Cyboran & Goldsmith, 2012). Nearly 300 employers from numerous organizations in the United States and Canada participated in the Sibson’s Healthy Enterprise Study in 2009. Results showed that leadership style, an overall organizational health vision, and collaborative input from employees are linked to outcomes including lower healthcare cost and lower employee turnover rates.

According to Deci et al. (2000), people also need an environment of support from others, a feeling of autonomy, and skills to accomplish a valued health outcome. Organizations can provide benefits to employees such as discounted gym memberships, connections with substance abuse treatment programs, and insurance that provides preventative medical care. Perks such as healthier food choices in vending machines and management approval for walking clubs or workout competitions are other ways management can advocate for better health choices.

When leaders manage employees’ health, they must follow guidelines outlined by the Americans with Disabilities Act. Employers cannot require individuals to take part in health questionnaires or to complete a physical exam (unless specifically job related) to measure overall health levels. Voluntary participation, on the other hand, in health education classes and incentives for participation in insurance programs, such as the Johnson & Johnson $500
discount on insurance premiums after they completed a questionnaire and physical tests, is a legal way to assess overall employee health status (Cascio, 2006).

A qualitative study conducted by Podlog and Dionigi (2009) found that, a seven week exercise intervention program was successful in meeting the basic psychological needs outlined in self-determination theory (SDT). Results of the focus group discussions revealed that skill acquisition and challenging their bodies gave participants a sense of accomplishment and that the training leader’s feedback and knowledge was a vital part of the intervention. The need for relatedness was fulfilled by the friendships gained by working out with coworkers and/or family, but the study did note that a lack of support from family could diminish enthusiasm. The choices of exercise location, time, and types of activities gave the individuals a feeling of autonomy. Some participants reported feeling pressure from coworkers if they could not attend sessions, which could have possibly reduced autonomy.

Organizational citizenship behaviors (OCB) and wellness behaviors closely mirror one another in several aspects including the theoretical foundation, the workplace effectiveness and efficiency, and the conscientious personality trait. SDT’s basic psychological needs of autonomy, competence, and relatedness play a role in the frequency or pattern of both behaviors, both of which can lead to improved financial and environmental situations at a workplace even though they are not requirements of job descriptions. SDT can be a basis through which to understand both OCB and health behaviors.
Both constructs deal with personal choices and actions that align with an individual’s abilities and valued outcomes. The outcomes do not require a tangible compensation but each behavior can lead to intrinsic rewards. OCB and wellness behaviors can be rooted in reliable and responsible behavior that helpful in stressful situations that can help individual meet challenges and grow in their abilities.
CHAPTER III

METHODOLOGY

This study examined the relationships between the self-reported frequency of organizational citizenship and wellness behaviors in employees. Participant data came from two methods of data collection that include a convenience sample and a snowball sample.

Participants

Convenience sample participants consisted of employees of a school district located in South Mississippi with a population of $N = 1356$. The school district is comprised of a central office, three high schools, three middle schools, seven elementary schools, a vocational center, and an alternative school. The employees represent diverse ages, ethnicities, educational backgrounds, socio-economic status, and work experiences. Administrators, certified faculty, non-certified staff, which includes teacher assistants, office workers, nurses, behavior specialists, custodians, cafeteria workers, and transportation workers, received an email containing study information and a link to an online questionnaire. Employees of the school district communicate via email regularly to conduct school business so access to computers and the Internet was readily available. Furthermore, it was assumed that the employees’ skills required for completing an online questionnaire would be sufficient to allow them to participate in the study. Only employees over the age of 18 participated, and completion of the questionnaire was used to confirm the individual’s consent to take part in the study.
In addition, potential participants in the non-educational sample were known to the researcher and were recruited through personal email accounts in order to increase the number of participants. These individuals were asked to forward the questionnaire link to their colleagues who would also volunteer to participate. Participants represented a cross-section of racial and economic diversity, work place environments, and job skill requirements. To participate, these individuals have been employed and are eighteen years old or older. Completion of the questionnaire indicated the individual's consent to take part in the study.

Instrumentation

Several instruments were combined within the Qualtics online survey website that were used to collect data related to organizational citizenship behavior, wellness behaviors, conscientiousness, psychological needs as they pertain to the self-determination theory, and demographic data. The study questionnaire had a readability index of grade 6.5. No special training was needed for scoring the instruments.

Demographic questions and wellness questions were created by the researcher. Demographic questions included the following: gender, age, race, education level, work experience, and occupation. Wellness items related to the Centers for Disease Control and Prevention’s top four behaviors that are associated with premature adult death, which includes inactivity, obesity, tobacco use, and alcohol use. The questions in the study that relate to obesity are derived from The American Heart Association’s set guidelines for healthy
behaviors (Lloyd-Jones et al., 2010a). Physical activity, tobacco use, and alcohol use was measured by the amount (on average) of behavior/use per week. The scale range includes: never, 1-2 days per week, 3-4 days per week, 5-6 days per week, daily, and more than one time per day. Healthy responses are three or more days of physical activity per week, never use tobacco, and two drinks or less per day for alcohol use. Obesity data were collected by reporting height, weight, and body type data of each participant, which was entered into the Body Mass Index (BMI) Calculator (Body mass index, 2014) on the American Heart website to gain a new variable named “BMI.” BMI is measured by percent and is categorized by underweight, normal weight, over-weight, and obese. Validity and reliability for this section of the questionnaire is unknown, and establishing the reliability and validity of this is beyond the parameters of this study.

The conscientiousness scale is included in Goldberg’s (2014) International Personality Item Pool (IPIP). The 10 item instrument has a response scale range with descriptors that include 1 (very inaccurate), 2 (moderately inaccurate), 3 (neither inaccurate nor accurate), 4 (moderately accurate), and 5 (very accurate). Overall validity for Conscientiousness IPIP when correlated to the Big Five Scale is $\alpha = .84$. Goldberg et al. (2005) reported $\alpha = .79$ on the ten item conscientiousness scale that was used in this study. In addition, in a sample of 760 adults (Socha, Cooper, & McCord, 2010), the confirmatory factor analysis pattern matrix loading coefficient range for conscientiousness was 0.399 to 0.886.
The Organizational Citizenship Behavior Checklist (OCB-C) (2011b) was recently developed to measure the frequency of OCB at work. Past versions of this type of instrument had items that reflected OCB and counterproductive behaviors. The OCB-C is a twenty item scale with a response range of 1 (never), 2 (once or twice), 3 (once or twice per month), 4 (once or twice per week), and 5 (everyday). Fox and Spector (2011a), authors of OCB-C, reported $\alpha = .89$ to $\alpha = .94$ in three separate studies using the instrument.

The last instrument in the study is the Basic Psychological Needs Scale in General (BNSG) (2013). The instrument was developed by Edward L. Deci and Richard M. Ryan to measure need satisfaction in general in adults as described in the self-determination theory. The 21 item scale has three sub-scales that are comprised of seven autonomy questions, six competence questions, and eight relatedness questions. Participants rate their agreement with the statements on a scale that has a response range of 1 (not at all true) to 7 (very true). The BNSG has an overall internal consistency range from $\alpha = .84$ to $\alpha = .90$. Molix and Nichols (2013) reported the average value of $\alpha = .87$ for the combined three sub scales. The sub items have an internal consistency range of $\alpha = .61$ to $\alpha = .81$ with an average of $\alpha = .65$ for autonomy, $\alpha = .60$ to $\alpha = .86$ with an average of $\alpha = .72$ for competence, and $\alpha = .61$ to $\alpha = .90$ with an average of $\alpha = .82$ for relatedness. In addition, Johnston and Finney (2010) reported that the negative wording of some of the BNSG items possibly lowered the internal validity in a study that involved college students. They discussed the need for further research on the instrument in people of different ages and contexts.
Administration, Scoring of Scales, Procedures

A meeting was requested with the Superintendent of Schools at a school district in Mississippi to gain permission to distribute questionnaires to employees over the age of 18. The superintendent signed the permission form to allow the researcher to conduct the survey.

Upon approval of University of Southern Mississippi’s Institutional Review Board, an email was sent to school district employees containing study information and a link to questionnaire on the Qualtics site. The email was sent by someone other than the researcher; therefore, the total number of possible participants is not known but ranges between 600 to 1356. This email announced the date for completing the questionnaire, which was specified by the superintendent. Participants in the snowball sampling were also sent an email link containing study information and a link to the questionnaire on the Qualtics site. Participants were asked to send the link using personal email accounts to two or more additional people who might be willing to participate in the study.

The Internet questionnaire contained an introductory letter of purpose, contact information, and anonymity information. The participants were asked to answer a question concerning age (must be over 18 to participate) before being allowed to access the questionnaire. Deadlines for study completion will be included on all emails.

Data Analysis

A response of 135 participants was necessary for a large effect size with a power level of .80 and an alpha of .05. Statistical tests included descriptive
analysis, confirmatory factor analysis (CFA), exploratory factor analysis (EFA), and multiple regression. Once data were collected, new variables were computed as needed. A descriptive analysis was run to check for unusual values in the data. Multiple regression tests were used to measure whether the relationship of the frequencies of wellness behaviors and of OCBs differs depending on the influence of demographic variables. Confirmatory factor analysis with AMOS was used to confirm the existing model and to establish validity and reliability. Once model structure was detected, variability was also determined.
CHAPTER IV
RESULTS
Overview
To examine the data, this chapter is organized by a description of the
study population, explanation of tests conducted with the data, and the outcomes
of the analysis. To study the pattern of relationships between OCB and wellness
behaviors, a questionnaire was developed by combining four separate
instruments that include (1) wellness behaviors and (2) demographic information
questions that were created by the researcher, (3) IPIP-Conscientiousness
(Goldberg, 2014), (4) OCB-C (Fox & Spector, 2011b), and (5) Basic
Psychological Needs Scale (Deci, 2013). The latent variables in this study are
OCB and wellness behaviors. Self-determination theory, conscientiousness, and
demographics are the observed variables.
To reduce the chances of a Type I error or a Type II error, G-power was
used to estimate sample size, effect size, power, and confidence intervals. A
total sample of 135 or more respondents was advised by G-Power for confidence
intervals set at .95, effect size at .50 (large effect or 25% of variability), probability
level at $\alpha < .05$, and power $(1 - \beta)$ at .80.
Descriptives
Data from the convenience sample and snowball sample were merged to
create one data set. Descriptives and frequencies were run in SPSS on the raw
data and were examined (see Table 1). Frequencies and descriptives provided
overall information about the data set including range, maximum and minimum
values, measures of central tendency, standard deviation, total number of respondents, skewness, and kurtosis. Data were checked for accuracy and several issues were evident. Wellness data showed a significant positive skew (S = 16.29, p>.01) and OCB had a normal distribution (S = 1.56, p<.01).

Wellness also showed significant kurtosis when compared to the upper threshold of 3.29 (K = 24.35), whereas the OCB value is below the threshold (K = -.79).

Analysis was continued, however, because the data set represents a large sample n = 418 (> 200) and scores were measured on Likert-type scales, both of which can increase the chances non-normal distribution results.

Table 1

*Descriptive Statistics of OCB and Wellness Behaviors*

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. D</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>OCB</td>
<td>418</td>
<td>59.00</td>
<td>33.00</td>
<td>92.00</td>
<td>59.1221</td>
<td>11.3381</td>
<td>.186</td>
<td>-.188</td>
</tr>
<tr>
<td>Wellness</td>
<td>418</td>
<td>15.00</td>
<td>3.00</td>
<td>18.00</td>
<td>5.3614</td>
<td>2.44097</td>
<td>1.939</td>
<td>5.601</td>
</tr>
<tr>
<td>Valid N</td>
<td>418</td>
<td>15.00</td>
<td>3.00</td>
<td>18.00</td>
<td>5.3614</td>
<td>2.44097</td>
<td>1.939</td>
<td>5.601</td>
</tr>
</tbody>
</table>

The population was relatively homogeneous with a majority of respondents self-reporting demographic information to be white, college-educated females employed with current employer for 10 or less years.

Participant responses also indicted similar wellness behaviors including less than once a day tobacco use and alcohol use, BMI ranges, number of medical services obtained in last year, and missed work days taken in the past year.
The 215 participant responses in the convenience sample and the 203 participant responses in the snowball sample were combined to reduce restrictions on the statistical range. The 418 participants in the combined sample consisted of 334 women and 83 men with the majority (30%) reporting to be between the ages of 41 and 50 years old. The groups were comprised of 91.4% white professionals with 79.9% who achieved a Bachelor degree, post graduate degree, or professional certification, and have worked for their current employer for 10 years or less (61%) (see Table 2). In addition participants in this group reported healthy wellness behaviors of alcohol use (65.3%) and tobacco use (85.4%) less than once a day. Evidence of unhealthy behaviors included 58.8% of participants exercising less than two days a week. BMI values included 37.3% who had a normal weight range and 68.4% were over-weight or obese. Medical services obtained by participants include 86.4% visiting a doctor’s office in the past year and 47.4% received a flu shot. Participants reported 87.8% missing three days or fewer of work due to illness in the past year.

Table 2

Descriptive Statistics of Participants

<table>
<thead>
<tr>
<th>Participants</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
<th>miss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some HS</td>
<td>1</td>
<td>48</td>
<td>39</td>
<td>1</td>
</tr>
<tr>
<td>High School</td>
<td>1</td>
<td>68</td>
<td>99</td>
<td>23</td>
</tr>
<tr>
<td>Associate</td>
<td>2</td>
<td>126</td>
<td>94</td>
<td>29</td>
</tr>
<tr>
<td>Bachelor</td>
<td>3</td>
<td>51</td>
<td>61</td>
<td>29</td>
</tr>
<tr>
<td>Post Grad</td>
<td>1</td>
<td>113</td>
<td>35</td>
<td>1</td>
</tr>
<tr>
<td>Age (yrs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18/20</td>
<td>142</td>
<td>113</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>21/30</td>
<td>62</td>
<td>62</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>31/40</td>
<td>25</td>
<td>25</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td>41/50</td>
<td>35</td>
<td>35</td>
<td>35</td>
<td>1</td>
</tr>
<tr>
<td>51/60</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>61/60</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Employed (yrs)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5/less</td>
<td>382</td>
<td>382</td>
<td>382</td>
<td>382</td>
</tr>
<tr>
<td>6/10</td>
<td>23</td>
<td>23</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>11/15</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>16/20</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>21/25</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>26/25</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>26/more</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Next, the data set was checked for missing scores for wellness behaviors, IPIP, OCB, and SDT. Missing values were replaced by transforming Linear Trend Point with a predicted value for each question. In addition, reverse scores were configured for questions 18, 20, 22, 24, 51, 52, 55, 59, 63, 64, 66, 67, and 68.

Reliability Measures

To test the adequacy of fit between the data and the instruments in the study, a series of confirmatory factor analysis (CFA) were used with each instrument individually and then collectively to examine the pattern of relationships between OCB and wellness behaviors. The first confirmatory factor analysis was run in AMOS on the four wellness behaviors including amount of exercise, BMI, amount of alcohol use, and the amount of tobacco use. The model fit, $x^2(2) = 10.338, p = .006$, was poor based on the CFI = .775, TLI = .326, and RMSEA = .100; 90% CI on RMSEA = .046 - .164. Positive correlations in the model indicated the more a person uses alcohol and tobacco, the healthier their wellness score. These results are contradictory to research findings endorsed by the CDC, American Heart Association, and American Diabetic Association *(Healthy people 2010, 2010)*. For this reason, and due to the restriction of the range in responses, alcohol use and tobacco use were eliminated from the model. The unusual tobacco and alcohol use results are likely linked to the positive-skewed distribution and extremely homogeneous population. Exercise and BMI were determined to be indicators of wellness in the current analysis (see
Figure 2) and in literature; they were included in the overall model. A CFA was not run since only two variables are being included in the overall model.

Figure 2. CFA model of wellness behaviors. The amount of exercise per week and BMI levels were used to explain healthy wellness behaviors in the overall model.

An exploratory factor analysis (EFA) was run the OCB-C instrument to parcel items. Parceling was used to reduce the number of items on the 20 item scale to reduce data and to possibly improve the goodness of fit for the model (Little, Cunningham, Shahar, & Widaman, 2002). Parceling included a principal component analysis (PCA) that was used for data reduction and a pairwise Varimax orthogonal rotation was run. The Kaiser-Meyer-Olkin measure showed the sample appropriateness for the analysis, KMO = .882. Bartlett’s Test of Sphericity $\chi^2(190) = 3023.345$, $p = <.001$ indicated a relationship among the variables and analysis was continued. Eigenvalues were obtained and four factors met the criterion of $> 1$ and in combination revealed 34% variance explained in dependent variable. Simple structure was not achieved. Based on *Discovering Statistics Using SPSS* (Field, 2009), the highest value was used to
determine the factor loading in cases of double-loading. Components that clustered together were labeled as four separate factors including (1) helpfulness, (2) skills, (3) sportsmanship, and (4) personal. The four components are representative of the latent construct. Content reliability was calculated on the individual subscales, and all four factors scales had a Cronbach’s $\alpha > .7$, indicating high reliability.

Next, a confirmatory factor analysis was run in AMOS on the four factor organizational citizenship behaviors latent variable that was created from parceling (see Figure 3). The model fit, $x^2(2) = 11.436, p<.003$, was a good fit based on the CFI = .982 and TLI = .945. In contrast, a RMSEA = .106; 90% CI on RMSEA = .052 - .170 suggest the model is not a good fit for the data. The overall scale resulted in a Cronbach’s $\alpha = .759$, which indicated a relatively high level of internal consistency for the four factor model. The model had a loading factor range of $\beta = .56$ to $\beta = .82, p < .001$.

![Figure 3. CFA model of OCB behaviors. Components of the OCB-C were significant predictors of OCB behaviors and used as a latent variable in the study model.](image-url)
A third confirmatory factor analysis was run in AMOS on the Basic Psychological Needs Scale. The initial model fit, $\chi^2(186) = 778.1$, $p<.001$, was a poor fit based on the CFI = .784, TLI = .756, and minimally acceptable with an RMSEA = .087; 90% CI on RMSEA = .081 - .094. Further inspection of the results showed that standardized regression weights indicated an issue between question 51 and question 67 with large modification indices of .633. The two items were similar with questions related to pressure in life and lack of opportunity. The two items were correlated for the possibility of an improved model fit. Then, another CFA was run (see Figure 4).

The model fit improved slightly from the first analysis, $\chi^2(185) = 672.644$, $p<.001$, but was still a relatively poor fit based on the CFI = .822 and TLI= .798, but adequate based on the RMSEA = .080; 90% CI on RMSEA = .073 - .086. Based on the RMSEA values, the researcher elected to proceed with the analyses. The three subscales also showed correlations including Autonomy/Competence $r = .83$, Autonomy/Relatedness $r = .85$, and Competence/Relatedness $r = .73$.

In addition, a Cronbach’s $\alpha = .866$ on the 21 item scale indicated a relatively high level of internal consistency. Furthermore, a high level of internal consistency was shown for each subscale that makes up the 21 item instrument that included: seven item Autonomy scale Cronbach’s $\alpha = .728$, six item subscale Competence scale Cronbach’s $\alpha = .658$, and eight item subscale Relatedness scale Cronbach’s $\alpha = .791$. 
Figure 4. CFA model of Self Determination Theory. Autonomy, competence, and relatedness are the subscales used to determine levels of SDT and to test the relationship to OCB and wellness behaviors in the study model.

Next, a confirmatory factor analysis (CFA) was run in AMOS on the IPIP (see Figure 5). The model fit, $x^2(35) = 478.937$, $p<.001$, was poor based on the CFI = .738, TLI = .663, and RMSEA = .174; 90% CI on RMSEA = .161 - .188. The output revealed that only four of the ten items were significant ($p<.001$). The four significant items had factor loadings ranging of $\beta = .75$ to $\beta = .93$, $p<.001$. In contrast, the six non-significant items had a factor loadings range of $\beta = -.04$ to $\beta = .07$, $p>.05$. 
Figure 5. CFA model of 10 item conscientiousness (IPIP instrument). Results of ten item instrument analysis showed that four of the 10 items had significant factor loadings.

Furthermore, the researcher compared the instrument items to the regression weights and found that the four significant items were a good representation of the consciousness behavior trait. A confirmatory factor analysis (CFA) was run on the four IPIP items (see Figure 6). The model fit, \( x^2(2) = 5.684, p = .058 \), was a good fit based on the CFI = .997, TLI = .991, and RMSEA = .066; 90% CI on RMSEA = .000 - .134. Content reliability was calculated resulting in a Cronbach's \( \alpha = .916 \) that indicated a relatively high level of internal consistency.
Data Analysis

Research question 1: What factors explain the pattern of relationships among exhibited levels of organizational citizenship behaviors and exhibited levels of employee wellness behaviors?

To examine what factors explain the pattern of relationships among exhibited levels of organizational citizenship behaviors and exhibited levels of employee wellness behaviors and after individual instrument analysis was determined to be reliable, the instruments were combined and a CFA was run in AMOS to test the goodness of fit for the hypothesized model (see Figure 7).

Model fit, $x^2(60) = 111.933$, $p<.001$ was a good fit. The CFI = .977, TLI = .970, and RMSEA = .698; 90% CI on RMSEA = .032 - .059 also suggests the model is a good fit for the data. The relationship between the latent variables of wellness and OCB was $r = -.005$, $p>.05$, which means that there is no significant relationship and the theorized model fails to show a link between the constructs.
Figure 7. CFA of study model to examine the patterns of relationships to OCB and wellness behaviors. Wellness has a stronger relationship to SDT and conscientiousness than OCB. Wellness and OCB are not correlated according to findings in this study.

Research question 2: Do combined components of self-determination theory (SDT) or conscientiousness increase the likelihood of organizational citizenship behaviors (OCB)?

Research question 3: Do combined components of SDT or conscientiousness increase the likelihood of wellness behaviors?

In addition, results were examined to see if combined components of SDT and/or conscientiousness increased the likelihood of OCB and/or the likelihood of wellness behaviors. Results of analysis did show a pattern of relationship between OCB and wellness behavior because of a positive factor loading to the self-determination theory variables. Wellness behaviors had a stronger factor
loading with SDT $\beta = .26$ than OCB $\beta = .05$. This relationship is also reflected in the large amount of research linking wellness behaviors, especially exercise, to SDT when compared to the amount of research linking OCB to SDT.

Wellness also had a stronger factor loading with conscientiousness $\beta = .26$ than with OCB $\beta = -.02$. The relationship between conscientious behavior and positive health behaviors are well documented in the literature and results of this study aligns to the research question. OCB, on the other hand, has a negative relationship with conscientiousness, which is not aligned with literature. OCB is most noted for a display of helpful behavior, but it also has a characteristic of conscientious behavior.

Research question 4: Do specific demographic variables positively relate to the frequency of OCB?

Before running a regression analysis, data were checked to determine variables that had the highest frequencies. Females, white race, and Master’s degree were embedded in the constant due to their high frequencies. Categorical variables were coded. The gender was recoded. Race was recoded creating four different variables that included American Indian, Asian, Black, and Hispanic. Education level was recoded creating four new variables that included some high school, high school, Associate degree, and Bachelor degree.

To investigate if specific demographic variables positively relate to the frequency of OCB and if the number of work days missed last year relate to OCB, a regression test was run on the dependent variable OCB and
demographic IVs. The model summary (see Table 3) indicated 24.8% ($R^2 = .248$) variability explained in the DV by the IVs in the model.

Table 3

*Model Summary of Multiple Regression Procedure of Combined Effects of Demographic Variables Age, Race, Education Level, Sex, and Days of Work Missed on OCB.*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.498$^a$</td>
<td>.248</td>
<td>-.272</td>
<td>13.00322</td>
<td>1.551</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Bachelor, Q3, Black, Q15, male, Asian, Am Indian, high school, Q6

b. Dependent Variable: OCBFAV4

The ANOVA (see Table 4) shows that the overall model is not significant ($F(9,13) = .477$, $p = .865$), meaning that IVs do not have a significant effect on the level of OCB.

Table 4

*ANOVA of Multiple Regression Procedure of Combined Effects of Demographic Variables Age, Race, Education Level, Sex, and Days of Work Missed on OCB.*

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>726.369</td>
<td>9</td>
<td>80.708</td>
<td>.477</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>2198.089</td>
<td>13</td>
<td>169.084</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>2924.458</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Bachelor, Q3, Black, Q15, male, Asian, Am Indian, high school, Q6

b. Dependent Variable: OCBFAV4

*Research question 5:* Do specific demographic variables positively relate to the frequency of wellness behaviors?
To investigate if specific demographic variables positively relate to the frequency of wellness behaviors, a regression test was run on the dependent variable wellness and demographic IVs. The model summary (see Table 5) indicated 48% ($R^2 = .480$) of the variability could be explained in the DV by the IVs in the model.

The ANOVA (see Table 6) shows that the overall model is not significant ($F(9,13) = 1.331, p = .310$), meaning that IVs do not have a significant effect on the level of wellness.

Table 5

Model Summary of Multiple Regression Procedure of Combined Effects of Demographic Variables Age, Race, Education Level, Sex, and Days of Work Missed on Wellness Behaviors.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.693a</td>
<td>.480</td>
<td>.119</td>
<td>1.39565</td>
<td>2.659</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Bachelor, Q3, Black, Q15, male, Asian, Am Indian, high school, Q6
b. Dependent Variable: Wellness3

Table 6

ANOVA of Multiple Regression Procedure of Combined Effects of Demographic Variables Age, Race, Education Level, Sex, and Days of Work Missed on Wellness Behaviors.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>23.335</td>
<td>9</td>
<td>2.593</td>
<td>1.331</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>25.322</td>
<td>13</td>
<td>1.948</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>48.657</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Bachelor, Q3, Black, Q15, male, Asian, Am Indian, high school, Q6
b. Dependent Variable: Wellness3
In summary, to determine the pattern of relationships between OCB and wellness, their relationship to SDT, and their relationship to conscientiousness, a series of CFAs and multiple regressions were conducted and results showed that the model is not significant. Furthermore, demographic variables did not impact latent variables. Research in the areas of OCB and of wellness, especially exercise, show links to self-determination theory and to conscientiousness, but this study with this population did not show a correlation between the two constructs.

With the two constructs, OCB and wellness, being similar in the possible positive effects on workplace climate and the comparable research in literature as they connect to the self-determination theory, they do not have a pattern of relationships between each other according to the results of this study. In addition, age, race, gender, and sick days taken in the last year did not have an impact on the incidence of the wellness behaviors and OCBs.
CHAPTER V
DISCUSSION

Overview

Because of fiscal pressures in response to a struggling global economy, employers’ ability to hire the most effective and efficient people for jobs has never been more important. A healthy, energetic worker is an asset to almost any organization; however, other employee behaviors such as organizational citizenship behavior (OCB) can have a great impact on the workplace also. An employee, who has high attendance rates at work and/or an employee who is motivated to handle tasks that promotes a productive work climate, is a valued asset for any organization.

Autonomy, competence, and relatedness are psychological needs described in self-determination theory (SDT) that can encourage wellness behaviors and/or organizational citizenship behaviors. The purpose of this study was to determine the pattern of relationships between OCB and wellness behaviors and the motivation that can promote a positive productive workplace.

Data were collected and analysis began with a series of CFAs and reliability analyses. Results of the analysis showed that OCB and wellness behaviors are not correlated but they are linked to SDT. If an employee volunteers for extra duties at work, which does not necessarily increase the likelihood that he or she also participates in wellness type behaviors or vice versa. A person who has autonomy, skills, and relates to others at work may or
may not have the same motivation or skills to excel in other areas of life such as exercising.

Conscientiousness is a personality trait that is related to OCBs (McCrae & Costa, 1987; Organ & Ryan, 1995; Singh & Singh, 2009) and wellness behaviors (Bogg & Roberts, 2004; Madhavan, 2004; Organ et al., 2006) in the literature. In this study, the personality trait had a small negative effect on OCB; meaning the more OCBs exhibited the less a person shows high levels of conscientiousness. In contrast, wellness behaviors had a medium effect on conscientiousness. Results revealed that conscientiousness and SDT had a larger impact on exercise and weight management than on OCBs.

The results of this study were consistent with previous research supporting the components associated with SDT and the relationship between SDT and wellness behaviors. These results are consistent with research conducted by Grant and Shin (2011), Reis et al. (1999), Edwards et al. (2005), Edmunds, Ntoumanis, and Duda (2006), and Wilson et al. (2006). In addition, BMI had the most significant influence on wellness behavior levels for participants in this study, which means that people with a normal BMI level self-reported high levels of health (Mehta & Chang, 2009). Exercise also had a positive impact on wellness behaviors (Lloyd-Jones et al., 2010a).

Implications

Implications of the study reinforce the patterns of relationships between SDT and wellness behaviors in the literature. Autonomy, competence, and relatedness are motivators for increased exercise and weight management. In
addition, research has shown that those with a conscientious personality generally had higher levels of wellness when compared to the general population (Bogg & Roberts, 2004). Conscientiousness did have a stronger relationship to wellness than to OCB in this study.

Current results fail to support the hypotheses and do not indicate a relationship between OCB and wellness behaviors. According to the results, people are likely to be motivated to focus on one area of life, such as exercising regularly. An employee who takes time and effort to work out or maintain a healthy diet may not have the time or energy to constantly engage in extra-role responsibilities at the workplace. Even with adequate skills, social support, and decision control, an individual may lack the desire or motivation to maintain a high level of wellness and high levels work responsibility.

Furthermore, conscientiousness and self-determination theory (SDT) did not strongly influence the level of organizational citizenship behaviors (OCB) exhibited by an individual. Even though OCB has a dimension of conscientiousness (Organ et al., 2006), this study sample did not show that a conscientiousness personality was an indicator of OCBs in the workplace. In contrast, Borman et al. (2001) found in a meta-analysis that conscientious and dependable personalities were related to citizenship behaviors. Researchers such as Gagné and Deci (2005) have explored motivation to complete tasks in the workplace with an emphasis in autonomous behaviors and how the use of extrinsic rewards can be counterproductive. Autonomous behavior can be the motivation behind behaviors like volunteerism and recycling, an idea which has
turned attention to the relationship between OCB and SDT (Gagné, 2003). In this study, autonomy had a relatively high factor loading for SDT but was not a relevant factor in the theorized model.

Limitations

Limitations of the study that may affect the validity or the generalizability of the results include lack of diversity in study participants, technology issues, and difficulties with instrument usability. A convenience sample and a snowball sample were enlisted to complete the study questionnaire. The researcher knew the convenience sample lacked diversity in the area of gender and race, but the sample was representative of the general population according to age, education level, work experience, and missed work days. The snowball population, on the other hand, had the possibility of being an extremely diverse sample because participants were recruited by email and Facebook. However, results revealed a homogeneous population, which could also negatively influence the results of the study.

Technology issues related to the questionnaire site possibly limited the number of participants. Emails were the main vehicle for recruiting participants. Participants reported that the email containing the instrument link could not be accessed after being forwarded two or more times. The researcher sent a second email and link to individuals who reported technology issues. Furthermore, instrument validity was compromised because data collection program options were set to open access. Program options could not be set to restrict the number of time participants could complete the questionnaire. Other
program options designed to improve the survey experience, such as a *back button* that allows participants to change responses or to return to the questionnaire and complete unfinished instrument items, were not user friendly. Programs, such as Google Docs, may be a better option especially when working with convenience samples that can restrict access by organizational email addresses.

The instruments combined to examine OCB, wellness behaviors, SDT, and conscientiousness contained confusing language and questionable consistency on several instrument items. For example, the IPIP/conscientious scale had only four out of 10 questions that had a significant value (p < .001). Adjustments were made to improve reliability and to increase integrity of the results. Examples of controversial or weak items on the instruments included “make a mess of things” and “shirk my duties.” The OCB instrument contained several double-barrels items such as “helped co-worker learn new skills or shared job knowledge.” Several participants reported the wellness item scale was too vague with a lack of “never” as a response. They further communicated that the “less than once a week” option implied that they used tobacco or alcohol at some point; questions they left unanswered because of the association with drug use. Furthermore, the questionnaire responses were self-reported so the veracity of the results is questionable.

**Future Research**

Recommendations for further research include a more narrow focus on studying the wellness component and the pattern of relationships to OCB. There
is an abundant amount of research that shows evidence of a relationship between wellness and SDT, especially in the area of exercise. Several valid instruments are available to collect data on the exercise, OCB, and SDT. The instruments used in future research should contain clear language with no double-barreled items. Furthermore, patterns of relationships between the two constructs in association to employee stress levels, administrative leadership style, and/or time management issues would also be interesting to investigate. Stress can be encountered at work that can impact eating habits, tobacco use, alcohol use, or inactivity. Levels of stress may have a relationship to the amount of OCB and/or wellness behaviors in the workplace.

If the Internet will be used to collect data, the software should be reviewed to ensure emails and links to the questionnaire are user friendly. Other sources of communication, such as Twitter, can be used to find participants to complete questionnaires.

Recommendations

"Motivation determines how hard an employee will try to engage in the behavior and the combination of abilities and opportunities determine whether the employee can exhibit the behavior" (Organ et al., 2006, p. 93). Even though wellness behaviors and OCBs are not correlated ($r = -.005$, $p>.05$) in this study, these behaviors can be encouraged and possibly developed in the workplace with strong leadership and a work environment that promotes opportunities for the desired actions.
Clear, purposeful communication along with fair and consistent leadership can lead to trust and buy-in to organizational goals and expectations (Pink, 2009). Completing a root cause analysis and finding the why behind actions or lack of actions can be productive in planning programs and/or developing policy, as well as positively impacting the organization's finances. The results of this study provide evidence that what motivates one type of action does not indicate that all valued behaviors will increase with the same plan or strategy.

By understanding that OCB and wellness are not related, individuals and organizational leaders can use and/or benefit by using this knowledge to assist in planning and development of employee training, organizational governance, and/or policy development. Motivation to exercise and/or to take on extra responsibilities at work, come from different sources as indicated in this study. If a supervisor has a goal of increasing wellness in the workplace, a wellness plan can be developed with the understanding that many individuals have internal motivation or the motivation can be interrogated and become a valued behavior. Furthermore, the more conscientious employee will probably incorporate an exercise routine more readily where others may need a trainer or workout buddy to hold them accountable for continued participation.

In contrast, according to this study, extra-role behaviors are not internally motivated (β = .05) and a conscientious personality (β = -.02) will not be a predictor in who will or will not act accordingly. If a goal is to create a more positive workplace climate, understanding that employees will not exhibit OCBs because of their internal drive alone will be useful in developing a plan for
organizational changes. The need for rewards or punishment should be a component of the plan as well as a leadership plan that will generate a nurturing and creative environment to increase the possibility for OCBs to occur.

The boss or supervisor is the main character in creating the opportunity and/or coaching skills needed to increase positive behaviors in the workplace. To create changes and/or improvements in an organization’s culture, business leaders must inform, listen, and connect with employees (Beckley, 1985). Everyone within an organization must be aware of the goals, roles, and expectations, and they must be communicated in a clear and concise way. Changing workplace culture is an ongoing process and can be improved over time. For instance, if decreasing the absenteeism rate is a goal, a wellness plan may be one way to accomplish the task. Leaders modeling desired behaviors also send a message of the expectations and importance of an individual’s actions. Modeling behaviors and/or providing training can also aid in teaching skills to enable the individual. In addition, employees who set professional goals that relate to organizational goals can be a part of team, which gives some autonomy in the task. If one asks, “What has this got to do with me,” professional goals can bridge the individual to the overall organizational expectations.

Leaders will benefit from listening to employees as indicated in a transformational leadership style. By giving workers a voice, a boss can learn employee concerns, roadblocks, and even solutions to issues that will allow them to develop and implement successful programs. Individuals in the study
population are predominately white, Generation X women. Gen Xers (Espinoza, Ukleja, & Rusch, 2010) are juggling responsibilities in efforts to balance work-life responsibilities. Stress and time management issues are some possible reasons for lack of exercise and/or participating in mentor programs, for example.

Communication will promote better connections between workers on every level and give employees an increased level of autonomy and relatedness, which were predictors of SDT and internal motivation. Leaders might be overwhelmed with responsibilities, but finding time to building connections with employees can reap substantial benefits. These connections encourage loyalty, teamwork, and trust that can inspire desired cultural changes. Bosses have the responsibility of guiding employees to accomplish tasks and to promote the organization. By having a better understanding of what and how employees are motivated, goals can be more easily achieved.

In addition, organizations, businesses, or companies can use the results of this study by adjusting current goals, policy, benefits, and schedules, as needed. For instance, results from this study show that many employees who participated in the study, had internal motivation towards participating in wellness activities. Autonomy ($\beta = .82$) and relatedness ($\beta = .75$) had the most impact on the frequency of exercising, so when reviewing benefits, employees need choices in how, where, and with whom they work out. By offering discounts at local gyms or YMCAs, that provides childcare, and hours conducive to organizational work schedules, individuals can find services that align with their home/work responsibilities and increase participation. Wellness behaviors are
beneficial in strengthening the body, but it is also beneficial for mental health. Stress and tension are among the leading causes of absenteeism at work (Pink, 2009). Employee Assistance Programs in addition to gym member benefits could be advantageous to reaching organizational goals by helping employees deal with mental and emotional difficulties.

In addition to offering Employee Assistance Programs and wellness center discounts, employee benefits should be publicized and promoted within the organization. For example, Human Resource (HR) personnel can outline details of insurance benefits and of opportunities for discounts to provide individuals information to make knowledgeable decisions about their lifestyle behaviors. The organization can also sponsor events such as Weight Watchers or walking clubs at the work location for employee convenience and to show that wellness is a priority for the organization. Group events can foster relationships, which were found in this study to be a factor in participating in wellness behaviors.

Relationships and teamwork can be difficult to build within the walls of a workplace, but leaders can try to provide opportunities to shape the physical workplace and to change morale, increase feelings of relatedness, and increase the likelihood of OCBs. Cubicles, separate work spaces, the boss’ attitudes, and hectic workloads can hinder social relationships at the workplace. Several suggestions to promote personal connections and to build camaraderie include the creation of a Care Wall where employees can post important events to share with others, such as a birth announcement or illness. The board should be placed in a central area for easy viewing. Knowing others and their life situations
can help build relationships and increase the likelihood of OCBs. In addition, providing opportunities to meet in groups and to participate in governing a task will give individuals a voice and feelings of ownership and collaboration in the organization.

HR managers can also use this study’s results when hiring new employees. During interviews, individual scenarios and could be given questions that will show personality characteristics such as conscientiousness, altruism, and work ethic. A careful examination of past experience will also give clues to patterns in behaviors desirable for the organization. HR can also track absenteeism and insurance related claims to find patterns or issues related to wellness and/or skill development. Reporting the cost related to such issues can show the reasoning behind organizational goals to promote better understanding and buy-in. In addition, an examination of data can give clues to professional development topics and for opportunities for employee career development.

Conclusion

With the many parallels between OCB and wellness in literature, including motivation, conscientiousness, and potential impact on a workplace climate, the results of this study leads to more questions than definite conclusions of how organizational leaders can create opportunities to increase OCBs and wellness behaviors.

Wellness behaviors and OCB are constructs that are based on personal choices that align with an individual’s abilities and valued outcomes. People are motivated partly by an internal drive, by external punishments and awards, by
opportunities to make decisions for themselves, to continue learning, and to make a difference (Pink, 2009). Even though every individual has different goals and personality traits, human resource managers and business leaders can increase the likelihood of desired behaviors to improve their chances for success in an ever changing world by studying and understanding what motivates people to make positive choices and work toward a vision that benefits the organization and the individual.
APPENDIX A

INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION

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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: CH13072401
PROJECT TITLE: Relationship of Organizational Citizenship Behavior Traits and Wellness Behavior Traits
PROJECT TYPE: Change to a Previously Approved Project
RESEARCHER(S): Vickie Yeager Brumfield
COLLEGE/DIVISION: College of Education and Psychology
DEPARTMENT: Education Studies and Research
FUNDING AGENCY/SPONSOR: N/A
IRB COMMITTEE ACTION: Expedited Review Approval
PERIOD OF APPROVAL: 09/17/2013 to 09/16/2014

Lawrence A. Hosman, Ph.D.
Institutional Review Board
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