

2015

# Factors Influencing Employee Participation and Nonparticipation in a Rural Hospital's Employer-Sponsored Wellness Program

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# Walden University

College of Health Sciences

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Nicole Kolacz

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2015

Abstract

Factors Influencing Employee Participation and Nonparticipation in a Rural Hospital's

Employer-Sponsored Wellness Program

by

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MSN, University

of Phoenix, 2009

BSN, Malone University, 2001

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

May 2015

## Abstract

Employer-sponsored wellness programs are important tools for keeping employees healthy, reducing an organization's healthcare expenses, mitigating risk factors, and promoting health and well-being. Little research is available on the factors associated with employees' participation in wellness programs in rural hospitals. Pender's health promotion model was used to determine how employees who participated in a rural hospital's wellness program differed from those who did not participate in terms of demographics, perceptions of personal health, general health behaviors, health locus of control, self-motivation, and situational barriers. A descriptive, correlational replication with the Hallion and Haignere questionnaire was used to survey employees. Of the survey's 186 participants, 29% participated in the wellness program. The reasons for not participating were scheduled program times ( $n = 51, 33.6\%$ ) and lack of interest ( $n = 31, 20.4\%$ ). As shown by logistic regression analysis, overall employee wellness and employee payment status were statistically significant predictors of participation. The Pearson chi square showed a statistically significant difference between program participants and nonparticipants in terms of responsibility for children/elders ( $p = .047$ ) and shift worked ( $p = .016$ ). These findings suggest that, when developing and implementing a comprehensive wellness program, the characteristics and needs of employees, along with organizational culture, must be considered. The successful implementation and engagement of staff in an employer sponsored wellness plan improve health through lifestyle change and risk reduction, thus promoting positive social change and leading to healthier communities. The findings of the study were incorporated into the recommendations for the hospital's wellness program.

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## Dedication

This project is dedicated not only to those employers committed to providing a healthy work environment, but also to those employees who are seeking a healthier lifestyle.

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I would like to thank and acknowledge the entire Walden University faculty for their dedication to learning, as well as their ongoing support and mentoring during my DNP journey. I would like to specifically recognize Dr. Allison Terry, Dr. Tracy Scott, Dr. Mary Beth Stepan, and Dr. Nancy Moss. Thank you for your patience, knowledge, and guidance. I would also like to acknowledge and thank Dr. Rosanna Hess for the knowledge, support, friendship, encouragement, and mentoring that she has provided to me over the past few years. I want to also thank Tony Snyder and Monica Bear for all of their help, support, and encouragement with my DNP project. Finally, but most importantly is my family. Without their love, encouragement, support, and understanding I would never be where I am today--especially my husband Vince and mother Valerie. It has been a journey, but one that I am most proud of completing!

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## Section 1: Nature of the Project

### **Introduction**

In 2010, healthcare expenses in the United States totaled \$2.6 trillion dollars, or 17% of the gross domestic product (GDP, Taylor & Bithoney, 2012). Healthcare spending is projected to increase another 5.8% with recent healthcare reforms (Taylor & Bithoney, 2012). In the United States, obesity is reaching epidemic levels (Centers for Disease Control and Prevention [CDC], 2012a). Obesity is often responsible for many chronic disease conditions, such as cancer, liver conditions, hypertension, heart disease, stroke, and diabetes (CDC, 2012a; Weight Control Information Network, 2012). Wellness studies on obesity and glucose levels were found to have a significant positive association with medical spending; annual spending for obese employees is more than \$1,000-\$2,000 greater than those employees who are not obese (Horwitz, Kelly, & DiNardo, 2013).

Taylor and Bithoney (2012) found that healthcare expenses are 9% higher for healthcare professionals when compared to other occupations. Hospital workers and their families are also more likely to use emergency department services and are 5% more likely to be hospitalized. In response to healthcare reform initiatives, organizations and insurance companies are working to improve the health of the employee, to reduce/manage risk, and reduce the overall cost of healthcare.

One approach to this challenge has been to develop wellness programs. Unhealthy employees are costly to the bottom line. They have decreased productivity, higher rates of absenteeism, and are more likely to file a workers' compensation claim that results in

lost days due to injury or illness (Heinen & Darling, 2009). According to Parks and Steelman (2008), absenteeism—which is often attributed to an unhealthy lifestyle—costs employers \$26 million dollars annually. Taylor and Bithoney (2012) found that healthcare expenses consume 4% of hospitals' operating revenue annually; the average hospital spends 68% of its operating margin on employee healthcare benefits. Typically, up to 75% of an employee's health insurance premium is paid by the employer (Ganter, 2012).

Overall levels of wellness and healthy lifestyles in the United States continue to be less than optimal. Many illnesses, chronic disease states, and poor health conditions are preventable or modifiable. According to Ganter (2012), 70% of health is the direct result of behavior choices and environmental factors. Some of the more common modifiable risk factors that account for over half of all chronic diseases high blood pressure, tobacco use , excessive alcohol use, high cholesterol levels, being obese or overweight, low dietary intake of fruits and vegetables, and decreased physical activity (Niessen et al., 2013). Chronic diseases account for the most prevalent and costly health problems; they take a toll not only on the individual and family unit, but also the employer and healthcare system (Ganter, 2012). This solidifies the importance of creating a workplace wellness program, as these programs support employees in understanding their risks, as well as developing strategies to modify risk factors to adopt healthy behaviors (Kaspin, Gorman, & Miller, 2013). Employers can be an integral solution to the problem by providing wellness programs for employees, offering access to healthier food options, and disease management programs targeted at risk reduction or elimination,

especially those programs focusing on obesity and healthy weight management (Lankford, Lang, Bowden, & Baun, 2013).

There has been a rapid increase in obesity rates in the United States, with 35.7% of adults and 17% of children classified as obese (CDC, 2012a). There is a strong association between obesity and many chronic conditions such as heart disease, cancer, diabetes, stroke, and liver disease (CDC, 2012a). Obesity related medical costs reached an excess of \$147 billion, with obese individuals having higher medical costs (CDC, 2013). One out of every two citizens has at least one chronic illness (CDC, 2013a). Chronic illness is also prevalent in the United States: seven out of 10 deaths are due to chronic disease (CDC, 2012c). Individuals with chronic diseases contribute to the dramatic increase in healthcare costs (Bush, 2012).

An important component to health and wellness is diet (Lankford et al., 2013). Diet and obesity are associated; Americans tend not to eat according to the recommended daily nutritional guidelines and often do not get recommended levels of daily physical activity (CDC, 2013a). Low physical job demands (Choi et al., 2010) and increased levels of sedentary work (Choi et al., 2010; McCrady & Levine, 2009) can contribute to obesity levels, which, in turn, can lead to other chronic disease conditions. A healthy lifestyle is an important foundation to overall health and wellness.

The purpose of this study was to address the development of an employer-sponsored, comprehensive wellness program in a rural hospital and the factors associated with employees' participation in the program. It is divided into five sections. Section 1 includes an introduction, project title, problem statement, purpose statement, project

objectives, significance/relevance to practice, project questions, evidence based practice significance of the project, implications for social change in practice, definitions of terms, assumptions and limitations, and summary. Section 2 includes a review of the literature, both specific and general, and conceptual models/theoretical frameworks. Section 3 includes the project design/methods, data collection, data analysis, project evaluation plan, and summary. Section 4 includes a summary and evaluation of findings, implications for practice, and project strengths and limitations. Section 5, the final section, includes the scholarly product for dissemination.

### **Problem Statement**

There is a need for organizational leaders to understand the health and wellness of their employees and to develop a best practice model that is specific to their organization- (Taylor & Bithoney, 2012). Baicker, Cutler, and Song (2010) found that medical expenses decreased an average of \$3.27 for every dollar spent on wellness initiatives, while absenteeism costs fell \$2.73 for every dollar spent. Over 143 million adults are employed full time and spend at least 8 hours at work (United States Department of Labor, 2013 as cited by Lankford et al., 2013). Because employees spend the majority of their waking hours there, the workplace is an ideal location for wellness programs (Baicker et al., 2010; Person, Colby, Bulova, & Eubanks, 2010). The workplace also provides the necessary structure and social networking to reach a large target audience, while also providing support to employees (Robroek, van Lenthe, van Empelen, & Burdorf, 2009). Furthermore, 60% of Americans obtain their health insurance from their employer (Baicker et al., 2010).

Although overall program effectiveness is heavily influenced by the characteristics of the target population and the organization's culture, the efficacy of wellness programs participation rates are often below 50% (Robroek et al., 2009). Because of low participation levels, organizations often do not achieve population health outcomes (Ganter, 2012). Despite these factors, employers of less than 1,000 employees often do not have comprehensive wellness programs in place and if one is present, it is often limited in scope (Baicker et al., 2010). This provides an opportunity for smaller-sized organizations to provide comprehensive programs to their employees. When developing a wellness program, it is important to understand the employee's perspective about participating. The problem addressed in this study is that there is little research on the use of comprehensive wellness programs in small rural hospitals.

### **Social Change**

Lifestyle diseases have become an underlying health issue for the United States (Mattke et al., 2013). Lifestyle diseases are attributed to unhealthy lifestyle choices, such as poor nutrition, tobacco use, inactivity, and alcohol consumption (Ganter, 2012; Mattke et al., 2013). These choices lead to many chronic disease conditions, such as heart disease, diabetes, cancer, stroke, and respiratory health issues (CDC, 2012a; Ganter, 2012; Mattke et al., 2013). Chronic diseases account for seven out of 10 deaths in the United States and 75% of all healthcare spending (Ganter, 2012). Fifty percent of all cancer in the United States is thought to be preventable by adhering to a healthy lifestyle (Ganter, 2012).

It is estimated that 91% of diabetes cases in the United States are caused by inadequate nutrition and lack of physical activity; for the majority of the population, it is considered preventable (Ganter, 2012). Mattke et al. (2013) noted that chronic health issues used to be common in the elderly; however, there has been a shift to the younger working class, placing an economic burden on organizations. Chronic diseases, such as those noted above, can lead to decreased quality of life, increased health costs, disability, and death (CDC, 2012a; Mattke et al., 2013).

Positive social change is defined as the application of ideas, strategies, and actions to promote the overall worth, dignity, and development of individuals in their community, society, organization, and culture to improve both social conditions and humankind (Walden, 2012, p. 4). Concern for employees' health, as well as the underlying costs associated with unhealthy employees, have driven employers to adopt wellness programs (Heinen & Darling, 2009; Mattke et al., 2013). They are popular because they reach employees at an age when interventions targeting risk reduction and disease prevention can impact employees' long-term health, thus reducing the risk for chronic disease (Mattke et al., 2013).

Mattke et al. (2013) found that lifestyle management interventions in the workplace can reduce risk factors and promote health and wellbeing, both of which would help mitigate the current epidemic. As a large employer in the community, the target hospital has a social obligation to promote health and wellness for its employees, as well as serve as a positive role model for other organizations. The wellness program should create a positive social change because the program will promote healthy

lifestyles and wellness, which will improve social and human conditions not only in the organization, but also the community.

### **Setting**

The study took place at a 55-bed community hospital with 298 employees located in a county of 42,366 people, in a rural area in Ohio (United States Census Bureau, 2014). It is estimated that approximately half of the county's population is either Amish or Anabaptist (Chief Financial Officer of the target hospital, personal communication, October 30, 2014). The hospital's current wellness program, Health Matters, was limited in scope. It included employee initiatives such as a walking contest, a "biggest loser program", and an annual health risk assessment (HRA) of each employee conducted by hospital administration.

In 2013, the organization added an option. Participants could satisfy six Health Matters criteria in order to earn a preferred rate on their insurance premiums. These criteria included a nicotine test (to verify that the employee was tobacco-free), an annual physical, and a screening appropriate to age and gender, an annual HRA, a biometric screening (blood pressure, body mass index, fasting glucose, and total cholesterol), as well as one individual health counseling session if the overall HRA wellness score was less than 50. Participants who completed the biometric screening received \$50; if their results were within normal limits, they received \$100. At the time of the study, participation in the wellness program was below 30% and there was no formal mechanism in place to track outcomes (hospital's employee health nurse, personal communication, November 9, 2013). In 2012, the organization spent over \$1.3 million on

health expenses (hospital's Chief Financial Officer, personal communication, October 16, 2013). Low participation in the wellness program could lead to higher healthcare expenses, as those employees who are less healthy often have higher healthcare expenses.

At the target hospital, little is known about employees' beliefs, behaviors, attitudes, and perceptions about individual wellness and the hospital's wellness program. The project included a literature review, research on employee participation in the employer sponsored wellness program, and a proposal outlining a wellness model design, including key strategies for an employer sponsored wellness model in a small rural hospital using evidence-based practices. The wellness model was presented to senior leadership for organizational approval. This project is focused on the results of the literature search and review, as well as the methodologies related to research on employee participation.

### **Purpose Statement and Project Objectives**

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, perceptions about personal health, general health behaviors, health locus of control, self-motivation, and situational barriers. Along with evidence from other studies, the results were used to develop a comprehensive wellness program to meet the needs of employees at this rural hospital. The objectives of this DNP project were to

- Conduct a comprehensive literature review to determine best practices for wellness programs.

- Analyze data from a survey on wellness program participation, distributed by the organization, to learn about factors that influence participation in the hospital's wellness program.
- Use the survey findings, as well as the findings about best practices, to develop a comprehensive wellness program for the hospital that met both the needs of the organization and the employees.
- Present a comprehensive wellness model and program to hospital administration for approval.

### **Significance to Practice**

Recent changes in healthcare have placed an emphasis on health promotion and preventative medicine (Heinen & Darling, 2009; Mattke et al., 2009). Individuals are becoming more active participants in their healthcare and related outcomes through participation in wellness programs (Kaspin et al., 2013). Wellness programs focus on the health of employees in a specific work environment and include health promotion programs and initiatives (Ganter, 2012; Heinen & Darling, 2009; Hochart & Lang, 2011; Kaspin et al., 2013). Comprehensive programs help reduce employee health risks, provide support to employees in their environment, and improve the overall health and wellness of employees within the organization, often through the modification or elimination of risk (Kaspin et al., 2013).

Health care leaders must find ways to cut costs and improve the health of the workforce while also promoting a safe and healthy work environment for employees in the organization. The right combination of wellness initiatives could achieve a 5%

reduction in population health risks (Terry, Seaverson, Grossmeier, & Anderson, 2008). Healthy employees have decreased levels of absenteeism, reduced workplace injuries, reduced healthcare costs, increased productivity, decreased turnover, and higher levels of morale and engagement (Ganter, 2012; Heinen & Darling, 2009; Person et al., 2010). Improving the health of the workforce strengthens the organization and the health of the community (Taylor & Bithoney, 2012). Healthcare employees serve as role models for patients and ambassadors for the organization in the community; it is important that employees maintain a healthy lifestyle.

Health and wellness is complex and requires a multifaceted, comprehensive approach. Berry, Mirabito, and Baun (2010) noted that successful wellness programs have the following: measurable outcomes, an evaluation plan to continuously measure the program success, healthy strategies interwoven into daily operations, alignment of the wellness program with organization's mission and vision, ease of use, accessibility, use of incentives to encourage participation, targeted interventions that are part of a comprehensive program, ongoing communication, and support for the program throughout the organization. Benavides and David (2010) noted that creating a culture that values health, wellness, and healthy lifestyles is key to a successful wellness program and a healthy workforce. Optimal programs keep healthy individuals well and improve the health of those that are at risk, but it takes approximately 2 years to see sustained, positive results (Benavides & David, 2010).

Best practices in wellness models are comprehensive programs that include all facets of an employee's health and wellness, including prevention, education, and

behavior modification (Hallion & Haignere, 1998; Taylor & Bithoney, 2012). Best practice models include such interventions as health screenings, lifestyle/behavior modification classes, fitness center reimbursement, coaching, nutritional counseling and meal plans, exercise and nutritional classes, incentives, fitness assessments, blood testing and physical, and wellness websites (Benavides & David, 2010). Successful organizations promote a healthy work environment at all levels of the organization and make the program accessible to all employees (Heinen & Darling, 2009). There is substantial research to support the benefits of a healthy workforce; an employer-sponsored wellness program is one way to improve the overall health of an organization's employees (Benavides & David, 2010; Taylor & Bithoney, 2012).

### **Research Question**

How do hospital employees participating in the hospital wellness program differ from nonparticipants in demographics, perceptions of health, health locus of control using the Wallston Health Locus of Control Scale, self-motivation using Dishman and Ickes' Self-Motivation Inventory, and situational barriers?

### **Evidence-Based Significance of the Project**

Health and wellness are significant issues facing society. There is ample research to support the development and implementation of an employer-sponsored wellness program. There is a positive correlation between workers' risk factors and cost (Goetzel et al., 2012). Many risk factors are modifiable with proper intervention and thus overall cost and improving employee health outcomes can be reduced (Goetzel et al., 2012).

Specific employee demographic types are more likely to respond to and engage in employee wellness programs (O'Quinn, 1995).

One of the issues with developing and implementing wellness programs is the difficulty in showing the return on investment (ROI, Kocakulah & Joseforsky, 2002). Wellness programs can lead to early detection, prevention, or mitigation of risk factors, which ultimately reduces the employee's risk level, reduces costs, and improves outcomes (Kocakulah & Joseforsky, 2002). For example, if during a wellness check a participant has high blood pressure then the physician will treat the elevated blood pressure, aiming to prevent a future stroke or cardiac event; this type of situation is often difficult to quantify in terms of dollars saved or ROI (Kocakulah & Joseforsky, 2002).

Wellness programs can be cost effective and worth their initial cost (Benavides & David, 2010). Johnson and Johnson is a good example of a successful employer sponsored wellness plan. The company estimates savings of over \$250 million in healthcare expenses since the inception of its wellness plan 10 years ago (Berry et al., 2010). In 2010, the Mercer Group Survey of Sponsored Health Plans (which included data on over 2800 employers) found lower medical costs for those employees who participated in a health management program (Ganter, 2012). Another example is Citibank, which has spent over \$1.1 million on employee health management programs; however, this robust health management program saved the organization \$8.9 million dollars (Ganter, 2012). These positive results can affect the overall healthcare outcomes and expenses for the United States.

Wellness programs are meant to provide a structured, employee-focused approach to improve health outcomes, reduce risk, provide comprehensive care, and facilitate lifestyle changes (Benavides & David, 2010). Organizations with healthy employees are more productive and are often viewed positively by the community (Taylor & Bithoney, 2012). In the healthcare setting, healthy employees can be positive role models for patients. Comprehensive wellness programs are an investment in an organization's employees and they can show the employee that the organization truly cares about their health and best interests.

Work environments and employee health affects the overall organization and health of the workers; it is beneficial for organizations to have healthy work environments (World Health Organization, 2010). Healthy employees and environments also contribute to improved safety at the organization, as well as the community (WHO, 2010). The more leaders understand employee attitudes, beliefs, behaviors, and perceptions regarding wellness, the better programs can be designed which will improve participation and ultimately decrease cost and improve outcomes. Research findings, along with current evidence based best practices, were used to design a comprehensive wellness program, thus leading to an expected evidence based practice change. This comprehensive program was developed to meet the specific needs of the employees in the rural hospital setting where the study took place.

### **Wellness Program at the Study Site Hospital**

The rural hospital site for this research, has not implemented many of the best practices cited in the literature and many of those that have been implemented have not been sustained. There is no overarching plan for employee wellness at the study site. Its existing wellness program is fragmented and details about its success either do not exist or are not easily available. HRA information cannot be tracked and trended over time or in the organization. Vending machines and the cafeteria are often not healthy choices. Factors related to employee participation are unknown. These deficiencies present an opportunity for the hospital to revise its current wellness program in order to meet the needs of the employees and to be congruent with current best practices.

### **Definition of Terms**

The following terms are pertinent to the research study, development of the comprehensive wellness program, and the explanation of the conceptual model.

*Comprehensive:* In terms of wellness programs, addressing all the employee and organizational needs by offering variety in programming and timing of activities to include and engage as many employees as possible. Comprehensive programs include: leadership support, integrated incentives, formal communication plans, dedicated wellness staff on site, multiple program touch points, health awareness programs, risk identification through completion of HRA, biometrics, goals, metrics, and employee input (Justice, 2013; Terry et al., 2008).

*Employee:* A person working at the study setting on a full, part, or casual time basis who receives compensation for work provided to the organization. The person can be employed by any department and job/role in the organization.

*Health locus of control:* The extent to which employees believe that they can control activities that affect their health; the locus of control can be either internal or external in nature (Furnham & Steele, 1993). Individuals with an *internal locus of control* generally hold themselves responsible for actions and consequences, while those with an *external locus of control* tend to believe that they are not able to affect a personal outcome and that luck or destiny are responsible for their actions (Merriam Webster, 2014). Replicating the Hallion and Haignere (1998) survey instrument, the health locus of control will be measured using Wallston's Health Locus of Control scale. This instrument will measure the employees' beliefs regarding the relationship between their actions and outcomes to help determine if their locus of control is internal or external.

*Health practices:* Activities, perceptions, beliefs, and practices about health and healthcare (Simmelinck, Lightfoot, Dube, Blevins, & Lum, 2013).

*Nonparticipation:* No engagement in any of the study setting's wellness program initiatives.

*Participation:* Voluntarily engagement in at least one of the Hospital's wellness program initiatives.

*Perceptions of health:* The ability for the employees to recognize how healthy they are/are not; the way the employees recognizes their health (Merriam-Webster, 2014).

*Self-motivation:* The driving need for the employee to do something based on his or her individual needs or goals related to health, wellness, and healthcare. Section 3 of Hallion and Haignere's (1998) instrument measured employees' self-motivation using the Dishman and Ickes Self-Motivation Inventory. Employees use the Likert scale to indicate the degree to which a specific statement is characteristic or uncharacteristic of him or her.

*Situational barriers:* Circumstances that prevent or block the employee from participating in the setting's wellness program. For purposes of this study, Hallion and Haignere (1998) used multiple-choice questions to assess transportation method, percentage of time spent in child or elder care, and other job characteristics.

*Wellness:* Employee's state of intellectual, spiritual, emotional, physical, occupational, and social well-being; not necessarily the absence of disease (Strout, 2012).

*Wellness program:* Comprehensive structured program to promote wellness in an organization based on best practices, often specific to the organization.

### **Assumptions**

At the outset of this project, I assumed that there was an active wellness program in place at this study site, that some employees were participants and some were nonparticipants in the organization's wellness program, that all study participants read and understood the organization's wellness survey, that all participants responded honestly to the questions, and that participants completed the survey only once. It was also assumed that the questions in the survey were asked in a clear manner in order to assure participants were answering questions based on employee preference. Finally, it

was assumed the participants answered the questions based on the intended purpose of each question (Motley & Prelip, 2011).

### **Limitations**

I recognized several limitations of this study. Each of these factors had the potential to skew the results. Strategies were incorporated to decrease the potential harm of the limitations. These strategies are discussed in Section 3, Methods/Approach.

- Participants may not have provided honest responses because they do not want to share negative information about themselves for fear the responses are not anonymous (Walden University, n.d.), or they did not wish to disclose negative behaviors (Motley & Prelip, 2011).
- The sample size may be limited because the employees do not wish to share personal health information with the organization for whom they work for fear of some type of reprisal.
- Subjects may be biased towards their own agenda, or they may fear that they are not able to refuse to participate because of the potential for disrupting work, or the relationship with the organization (Walden University, n.d.).
- The organization itself promoted the survey instrument which could limit the number of responses, as employees may be hesitant to respond.
- Since the survey required retrospection, the participants may have had difficulty recalling information, which could influence the survey results.

- Because participants were recruited from a unique geographic area with particular cultural considerations, a homogenous sample resulted. Thus the findings are not generalizable to other populations.

### **Summary**

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, personal health perceptions, general health behaviors, health locus of control, self-motivation, and situational barriers. Study results were used to develop evidence-based comprehensive wellness program recommendations that meet the needs of the employees of this small rural hospital. The development of a comprehensive wellness program will create positive social and human change in the organization and community as employees become healthier and reduce overall risk factors

## Section 2: Review of Literature and Theoretical and Conceptual Framework

### **Introduction**

This section is a synthesis of general and specific evidence from the literature review. Also included is the conceptual model that framed the research study. I conducted a comprehensive literature review using CINAHL and MEDLINE databases. Search terms included *employee, wellness, health, organization, rural wellness, urban wellness, work, cost effectiveness, employee health, employee participation, socioeconomic status, wellness program participation, health promotion model, "Pender", perceptions of health status, current health practices, situational barriers, health locus of control, and self-motivation*. The initial search revealed over 650 citations. The literature search was further refined to include research-based articles published over the past 10 years and of "good quality". Good quality articles included statement of the problem, hypothesis/research question, literature review, conceptual framework, sample size, data collection and measurement, data analysis, findings, implications, and recommendations. Results sections of those articles were reviewed to determine if they were pertinent to the current study and contributed to the body of evidence. Only those articles that included a comprehensive wellness program were included in the study. An article of more than 10 years old was included when it was the best evidence available. Approximately 60 articles were reviewed for this project. There were few articles that described wellness activities in a hospital setting; no articles were located that described wellness programs in a small rural hospital.

## General Review

Wellness programs have been in place in some organizations for over 20 years; however, with changes in healthcare, more organizations are implementing worksite programs (Hochart & Lang, 2011; Marzec, Lee, Cornwell, Barton, & McMullen, 2013). These programs are designed to improve the health and wellness of an organization's employees. Unhealthy employees can add to overall expenses and reduce profitability for the organization; approximately 68% of an organization's operating profit is spent on healthcare expenses for employees and those covered under the employee's insurance plan (Taylor & Bithoney, 2012). Unhealthy employees often have reduced productivity, absenteeism, presenteeism, and an increased risk for injury on the job (Heinen & Darling, 2009). Collectively, absenteeism costs over \$26 million annually (Parks & Steelman, 2008). The Affordable Care Act of 2010 (ACA) encourages employers to implement wellness programs as a way to improve population health (Goetzel et al., 2012).

A comprehensive employer sponsored wellness program can reduce absenteeism, improve rates of job satisfaction and engagement, reduce insurance premiums and claims, decrease employee's spending on health expenses, reduce modifiable health risk factors, and decrease levels of job related stress (Ganter, 2012; Heinen & Darling, 2009; Person et al., 2010; Romney, Thomson, & Kash, 2011). Wellness programs can be used as recruitment and retention tools by employers (Parks & Steelman, 2008). Successful programs take a comprehensive approach to wellness and involve transforming the culture of the organization (Hochart & Lang, 2011). There are multiple examples of successful employer sponsored wellness programs. These programs have improved both

health and organizational outcomes and decreased costs for both the organization and the individual participant.

### **Systematic Reviews**

Three systematic reviews reported on different aspects of wellness programs. Kaspin et al. (2013) examined the characteristics and economic outcomes of employer sponsored wellness programs, as well as possible reasons for successful programs. They reviewed 20 organizations. Analysis revealed several common themes in successful programs including leadership and organizational support, accepting culture, strong motivation for leaders and employees, user-friendly program and physical environment, quick adaptation to the changing needs of the employees, education, and treatment of the employees, and the adoption and use of technology to facilitate HRAs and education.

Kaspin et al. (2013) found that most organizations reported a positive ROI and decreased absenteeism rates. They found total organizational healthcare expenses either decreased over time, or increased less than those employees who did not participate in the wellness program. Organizations with wellness programs also reported decreased health insurance premiums, on average of \$1,030 per employee lower than those not involved in a wellness program.

Kaspin et al. (2013) also found in the studies they reviewed that insurance premiums, worker compensation costs, and indirect expenses (absenteeism, lost workdays) decreased. In terms of physical outcomes, employer sponsored wellness programs had an increase in physical exercise, reduced health risks for participants, and smoking/tobacco cessation among participants. The ROI for programs within the analysis

ranged from \$1.60-3.90 saved for every dollar spent; employees also reported healthier lifestyles and improved health. Kaspin et al. also highlighted the importance of creating flexible programs, ones that can evolve and change with employee preferences, in order to be successful. According to Kaspin et al., an organization's wellness program is successful not only because of the wellness program design, but also because of the characteristics of the organization. Successful organizations have supportive leadership that encourages participation as a way to improve employees' health while not focusing completely on the financial aspect of a wellness program.

Robroek et al. (2009) examined participation in wellness programs, factors determining participation, and program characteristics that influence participation. Their review contained 23 studies. Participation levels ranged from 10%-64% with a median of 33%. The greatest participation was in programs offering incentives. The highest participation rates in those reviewed studies were among educated women and married employees. Robroek et al. also found higher participation rates among younger employees. Findings of this review support the need to develop comprehensive wellness programs that are tailored to fit the needs of the target group. The researchers suggest the use of incentives and multiple interventions to increase participation rates in organizations, while at the same time engaging more diverse numbers of employees (Robroek et al., 2009).

Osilla et al. (2012) discovered the impact of organizational wellness programs on financial outcomes, as well as the effect incentives had in employee participation. They reviewed 33 studies and evaluated 63 outcomes in their analysis. Osilla et al. revealed

that organizations with wellness programs had the following outcomes: 62% increase in exercise and physical activity levels; 50% improvement in diet which included higher fruit and vegetable consumption with lower fat intake; 50% improvement in physiological markers (BMI, cholesterol, blood pressure); 86% reduction in use of tobacco; and 87.5% reduction in healthcare expenses. The ROI averaged between \$1.65-\$6.00 for every dollar spent; all studies in the analysis demonstrated a reduction in costs associated with absenteeism (Osilla et al., 2012).

### **Meta-Analysis**

Two sets of researchers used meta-analysis techniques to review studies on wellness programs. Baicker et al. (2010) conducted a meta-analysis of 32 studies to examine cost and savings as well as method of delivery and types of interventions in wellness programs. Over 90% of wellness programs in this meta-analysis were in large companies (>1,000 employees). They represented a wide variety of companies (financial, manufacturing, education, universities, municipalities, utilities, pharmacists, telecommunication, and makers of consumer goods).

Baicker et al. (2010) found over 80% of the companies used a HRA to gather data on the employee population; a specific clinical assessment was also conducted and included laboratory screenings as well as a physical exam. Baicker et al. revealed that self-help materials (40%), individual counseling (40%), group activities (35%), and classes and seminars (35%) were popular among respondents. Incentives were used 30% of the time to increase participation and included a combination of bonuses and reimbursement to the employee. The most common programs were related to obesity and

smoking/cessation programs. Over two-thirds of the organizations realized a cost savings; for every dollar spent on wellness there was an average decrease in medical costs of \$3.27 and a decrease in absenteeism costs by \$2.73 for every dollar spent because employees are healthier, thus missed fewer days at work. This analysis suggests that further implementation of successful comprehensive programs with high levels of participation can reduce healthcare costs and have a positive ROI (Baicker et al., 2010).

A meta-analysis on workplace physical activity interventions revealed that workplace sponsored physical activity initiatives can improve health and worksite outcomes for participants (Conn, Hafdahl, Cooper, Brown, & Lusk, 2009). There were 38,231 subjects in this meta-analysis with the majority of subjects working at large organizations (>750 employees). The most common occupations in this meta-analysis were education, healthcare, government, and manufacturing. Significant positive effects were noted for physical activity, fitness, lipid measurements, anthropometric measurements, work attendance and job stress.

### **Specific Literature**

The literature review findings in this section are more specific in nature. The research includes findings pertinent to demographic factors, health risk data, attitudes regarding health, barriers, cost benefit of wellness programs, specific wellness models, use of incentives, obesity, differences among rural and urban areas, and long-term outcomes.

## **Demographics/Factors**

Certain participant demographics may encourage participation in worksite wellness programs. Haynes and Helms (2001) examined demographic differences between participants and nonparticipants, as well as methods to motivate employees to participate. The survey included 245 participants derived from membership in 14 Wellness Council organizations, which are located throughout Tennessee, Georgia, and Alabama. Subjects were divided into groups and analyzed by participant, nonparticipant, and unaware. Haynes and Helms concluded that wellness participants were most likely to work for manufacturing, service, or nonprofit organizations; the majority of respondents were female in all three groups and the participant group was more likely to hold management roles.

Haynes and Helms (2001) revealed no significant difference among the groups in terms of attitudes toward healthy lifestyles. However, over 80% of the participation group and unaware group in this study reported participation in frequent exercise, while the non-participation group reported 65% participation in exercise. The participant and nonparticipant groups in this study were familiar with their organization's wellness programs. Each group rated the most important benefit of the program differently. Participants rated healthier dietary habits as primary benefit, while nonparticipants rated management of stress as the primary benefit.

Haynes and Helms (2010) found that nonparticipants rated time (57.1%) and involvement in other fitness programs outside of work (23.4%) as the main reasons for not participating. In terms of incentives for participation, the participation group selected

financial incentives as the most effective method, while nonparticipants and unaware groups rated discounted healthcare premiums as the primary method for garnering participation. Participants also felt that wellness programs increased productivity. Nonparticipants were more likely to hold clerical jobs and noted that time was a barrier; however, offering time during work hours did not appear to motivate or incentivize participation. The unaware group was most likely to be line staff positions and were more interested in education on health and health benefits. Haynes and Helms found the lack of participation among the unaware group in the organization's program appeared to be because of communication, as the unaware group reported high levels of exercise outside of the company. The study validates the need to consider employee differences when developing a wellness program and incentives; leadership is encouraged to develop surveys to measure the needs of their employees.

Middlestadt, Sheats, Geshnizjani, Sullivan, and Arvin (2011) explored factors associated with participation in worksite wellness programs among rural service employees. The study included 279 participants in a Midwestern rural university setting. The study demographics included 50.5% female, 87.1% Caucasian, 65.2% were 44 years and older, 83.2% commuted less than 30 minutes to work, 74.9% were in blue collar positions, 75.3% reported exercising in the past month, and 80.4% had consumed less than 5 servings of fruits and vegetables. Middlestadt et al. found those who consumed at least five servings of fruit and vegetables and exercised in the past month were more likely to intend to participate; the younger the participant the higher the intention was to participate ( $p < .001$ ). The findings of this research suggest that participation is higher

among healthy employees. This study validates the fact that just by offering a program, organizations will get some participation; however, in order to be successful, worksite programs should promote a variety of initiatives in order to engage a wider scope of participants. Those programs that address attitude and perceived benefits may garner higher levels of participation resulting in weight loss, improved health, and reduced stress levels to name a few (Middlestadt et al., 2011).

Hallion and Haignere (1998) looked at specific factors between employees who participated in a wellness programs and those who did not participate at a medical center setting in New Jersey. The study hospital population was 2,366 people ranging from 19 to 82 years of age; 257 employees (%) voluntarily participated in the organization's wellness program. Survey participants were female (84.3%), Caucasian (77%), married (67.6%), attended college (39%), and employed less than 12.5 years. Hallion and Haignere found a significant difference among participants and nonparticipants for number of years employed ( $p = .000$ ), as nonparticipants were more likely to be employed longer. There were also differences between the two groups in terms of health improvement ( $p = .01$ ), smoking ( $p = .01$ ), weight ( $p = .03$ ), factors that require the employee to leave after their shift ( $p = .05$ ), hours worked per shift ( $p = .05$ ), employment status ( $p = .01$ ), and payment status ( $p = .01$ ). Nonparticipants of this employee wellness program were likely to be hourly employees, with no reported health improvements in the past six months, smokers, traveled, home alone, employed longer than 12.5 years, and overweight. Participants tended to be employed full time, paid a salary, and had better

health practices than nonparticipants. Top reasons for not participating included being too busy and inconvenient program times (Hallion & Haignere, 1998).

Joslin, Lowe, and Peterson (2006) examined employee participation in a wellness program in a Midwestern United States county government workplace and the relationship between demographic data and quality of life (QOL) characteristics of employees, as well as which programs they took place in. The purpose of the Joslin et al. study was to determine if high-risk employees were participating in wellness programs. Surveys were mailed to a random sample of 329 government employees (135 participants and 194 nonparticipants); 145 (%) surveys were completed and returned. Survey respondents tended to be older ( $p < .001$ ), work full time, and female ( $p < .05$ ). There were significant correlations between demographic (.64) and QOL (.57) ( $p = < .001$ ) variables and participation in wellness programs. Those participating in health educational offerings were more likely to be female, married, >44 years old, and have lower QOL functioning; nonparticipants were likely to be male, <44 years old, unmarried, and have higher QOL functioning. The research revealed that in terms of participation in medical office services (screenings & vaccinations) participants were more likely to be female, chronically ill, not satisfied at work, income <\$60,000, and have lower QOL functioning, while those nonparticipants were male, satisfied with their job, free from chronic illness, income >\$60,000, and have higher QOL functioning. These results stress the importance of understanding wellness participants' choices with respect to wellness programs and can be used to help understand high-risk employee needs and engage them in wellness program offerings. High-risk employees often have

the most to gain in terms of improving their health status and reducing risk (Joslin et al., 2006).

### **Health Risk Assessment Data**

Marzec et al. (2013) used the HRA data from two organizations to determine predictors of intention to change behavior. HRA data have been used historically in wellness programs to identify employee health risk factors and wellness interests. In this cross sectional study, Marzec et al. utilized the University of Michigan Health Management Research Center's HRA data, which measured 15 health factors among a major United States financial, services corporation and community college. In the marzec et al. study, 48,900 participants from financial corporations and 693 respondents from a community college completed the HRA. On average, HRA respondents from both groups in this study were younger and had a greater proportion of female respondents than the general employee population. Increasing physical activity and weight loss were common themes among both participant groups. Marzec et al. found that lower self-rated health perception scores and higher levels of stress corresponded to higher levels of behavior change intention scores; stress was associated with poor health perception. Marzec et al. found increased levels of physical activity and dietary fiber intake contributed to greater degrees of physical health perception. Higher levels of stress and lower perceptions of health status are directly associated with the desire to change behavior (Marzec et al., 2013).

Niessen et al. (2013) found that those who could benefit most from completing a HRA were more likely to do so. This included employees who had decreased levels of

physical activity, consumed excess amounts of alcohol, or were under increased levels of stress. However, tobacco users and employees who perceived their overall health as less than positive were less likely to participate in completing the HRA. This study was a cross sectional design exploring individual characteristics and work related factors to determine those associated with participation in the HRA. This study took place in five Dutch organizations with 8431 participants invited to participate in the HRA. Of nonparticipants, 27.2% completed the survey instrument and 29% of wellness program participants completed the survey. Increased HRA participation was found among the following: increased physical active ( $p < .001$ ), excessive alcohol consumption ( $p < .001$ ), increased levels of stress at home or work ( $p < .001$ ). Employees who rated their health less than desirable or moderate were less likely to participate ( $p < .001$ ). This could be because these employees are already under physician treatment, or they are concerned with keeping their health matters private and afraid if they participate their health will not remain confidential (Niessen et al., 2013). Tobacco users were also less likely to participate and the researchers felt this may be due to the fact that the employee does not want to feel pressured to quit. Incentives and a strong communication strategy were also linked to increased HRA participation (Niessen et al., 2013). Additionally the use of the web based HRA tool did not lead to decreased levels of participation by selective employee groups (Niessen et al., 2013).

### **Attitudes Regarding Health**

Motley and Prelip (2011) measured hospital employee attitudes regarding health and healthy behaviors. This cross sectional study of 705 participants also identified

incentives, job stressors, and the role spirituality/religion had in their health. A 28-question survey was developed to measure employees' attitudes and behaviors regarding health, wellness, job stress, and spirituality. Motley and Prelip's survey respondents tended to be female (78.9%), non-Hispanic (78.2%), and from nursing (27.8%). Exercise, stress management, and weight control were the top three themes participants were either ready to seek action on, or already working to improve in this study.

According to Motley and Prelip (2011), the top three incentives were worksite gym, personal coach, and discounts in exchange for exercise. Stress was a common theme in the study, with 40% reporting some type of stress, often related to their job and job responsibilities. Motley and Prelip found no statistically significant difference between job stress and engagement in healthy behaviors. The survey revealed that respondents were not actively exercising (46%), reducing stress (44%), getting enough sleep (43%), and eating a well-balanced diet, as they should (43%). Employees participating in the survey were generally more concerned with taking prescription medications (64%), reducing alcohol intake (82%), and eliminating tobacco use (92%). The findings revealed no association between spirituality/religion and healthy behaviors; however, those who were spiritual /religious and in a supportive community reported a higher engagement in health behaviors especially exercise, nutrition, and healthy weight. Those actively engaged in the wellness program were most interested in incentives such as an onsite gym, personal coach, and discounts in exchange for exercise. There was no statistical significant relationship between how actively engaged the employee was in the behaviors noted in the study and self-reported stress levels on the job. Motley and Prelip

found that participants that were actively exercising did not report lower levels of stress. These results support the importance of understanding the environment in which the program is developed in order to be successful. In addition, programs should consider initiatives that target an individual's spirituality (Motley & Prelip, 2011).

### **Barriers**

Bright et al. (2012) examined employee attitudes and barriers towards participation in worksite wellness programs. The survey took place at Ohio Northern University with approximately 303 participants. Survey results reported that respondents wished to meet with a pharmacist about medication education, self-care education, and information on generic or less costly alternative treatments. Bright et al. found that respondents also indicated the desire to exercise on campus (89.8%); physical activities of choice included walking club, yoga, meditation, weight training, and flexibility classes. Bright et al. found that nutrition counseling was also popular with 43.2% desiring some type of education. The group exercise format was also most popular (57.1%) when compared to other methods in this study. Barriers to participation in this program included work schedule (63.7%), being too busy (40.2%), and not feeling like they could leave work to participate (18.2%). Additionally, 14.2% of respondents noted lack of motivation as a barrier. Respondents under the age of 50 years were more likely to cite work schedules and being too busy as barriers compared to those greater than 50 years ( $p < .05$ ). Faculty were also more likely than nonfaculty to report being too busy but the difference was not statistically significant ( $p = .15$ ); nonfaculty reported it was often too busy to leave work to participate ( $p < .001$ ). It is critical to understand barriers to

wellness participation in order to develop programs and methods to decrease perceived or actual barriers to participants.

Person et al. (2010) identified barriers that prevent employee participation in wellness programs using a qualitative review of 50 subjects at a university setting. Interviews were conducted after the completion of the 10-week wellness program. Participants in this study were asked questions using a broad approach and then moved to responses that were more specific, to avoid leading responses from the participants. Person et al. determined the top responses for not participating included insufficient incentives (25%), inconvenient locations (20%), and time restraints (15%). The majority of participants found classes to be the most beneficial component of the wellness program. Class topics were centered around healthy eating, cooking, and shopping habits (Person et al., 2010). Person et al. found that creative approaches must be used to not only meet the needs of the employees, but also to encourage employee participation in wellness programs. Employee health and wellbeing can be improved by reducing barriers to participation and addressing employee preferences (Person et al., 2010).

Kruger, Yore, Bauer, and Kohl (2007) assessed employee attitudes toward barriers and incentives for their participation in an employer sponsored wellness program. Data were extracted from HealthyStyles Survey, which was a volunteer mail survey used to evaluate perceptions related to incentives ( $n = 4345$ ). Kruger et al provided insight into specific interventions that employees would support in the organization. Survey participants were more likely to be women (52.1%), Caucasian (73%), college graduate (36.5%), annual income of at least \$60,000 (47.1%), BMI of at least 30 (30.7%), and

regularly active (35.6%). Employees preferred physical health promotion activities such as the use of onsite fitness center (80.6%), onsite exercise classes (55.2%), and sports leagues (36.3%). Kruger et al. found that the most frequently reported nutritional interventions included weight loss programs (67.1%), personalized diet and exercise counseling (48.2%), weight loss support groups (32.4%), and online tracking tools (25.6%). The majority of participants preferred healthy vending machine options (77.5%). Lack of time was the most perceived barrier to participation (42.5%, Kruger et al., 2007). Kruger et al. encouraged individual organizations to collect their own work site-specific data related to employee barriers and incentives for participation.

### **Incentives**

One popular method used to engage and motivate employees to use wellness programs is to offer participant incentive. Approximately 56% of organizations use some type of incentive (Schmidt, 2012). Incentives can be of the carrot or stick approach, often depending upon the organizational culture and position, wellness program framework, and employee preferences. Incentives often differ from each organization and can include such items as cash rewards, gas cards, gift cards, or discounts on health insurance (Schmidt, 2012). There are certain legal restrictions that restrict the amount that organizations can offer employees in terms of incentives and reimbursements for wellness. The federal cap on reimbursements to employees is limited to 30% of the total cost of the employee's coverage (Schmidt, 2012).

Merrill, Hyatt, Aldana, and Kinnersley (2011) examined the impact of Salt Lake City's Healthy Lifestyle Incentive Program (HLIP) on lowering medication and medical

costs for employees. They examined claim data from 2004 to 2008, as well as conducted a cross sectional survey to gather information regarding participation and satisfaction with the HLIP. The HLIP includes free annual screenings, coaching on screening results, financial incentives for sustaining and risk modification, education, and health promotion activities (Merrill et al., 2011). They found that over the 5-year period, there was a 16%-23% increase in participation among male employees and a 34%-45% increase in participation among women. Merrill et al. noted that 43% of employees were *very satisfied* and 51% noted they were *satisfied* with the program. Merrill et al. also discovered that employees participated in the program because of the financial incentives, followed by the desire to improve one's health. Younger employees were more motivated by financial incentives, while older employees were more motivated by a desire to improve their health. HLIP has saved over \$3.5 million dollars over the 5-year period; for every dollar spent, there was a \$3.85 savings to the employer (Merrill et al., 2011).

Churchill, Gillespie, and Herbold (2014) examined types of program offerings and incentives that had the highest participation rates among 721 individuals working in higher education, for-profit corporations, and healthcare organizations. An anonymous survey questionnaire was provided to the research participants. Questions included background information, current participation in a wellness program, readiness to change, and current health behaviors and risk factors. The majority of the sample was Caucasian (92%), female (85.4%), and employed full time (75.4) for more than 10 years (33.5%). The mean age was 44.85 years of age with BMI of 26.04. Sixty percent of respondents were likely to participate or were already participating in offsite gym memberships,

onsite gym memberships, personal training, and better food options in the cafeteria. Those working in the healthcare industry were more likely to participate in an onsite gym when compared to employees working in the higher education industry ( $p = .001$ ). In addition, younger employees were more likely to eat healthier in the cafeteria and participate in the offsite gym membership. There were no statistically significant differences between participation and sex. A statistically significant finding between age and group classes was also discovered, younger employees preferred group classes. All incentives except for nonmonetary incentives provided motivation to the employees 80% of the time. This supports the hypothesis that employees are motivated by monetary incentives.

### **Cost Benefit**

A comprehensive wellness program designed by Blue Cross and Blue Shield provided wellness initiatives to 9637 employees at 15 various companies (manufacturing, legal firms, insurance company, municipalities, and school district) over a 3-year time span (Hochart & Lang, 2011). None of the organizations included in the study were healthcare organizations. The program, A Healthier You (AHY), included a HRA component and biometric screenings to participants. Programs were structured to meet the individual employee's need and included necessary resources and incentives to encourage participation. Incentives included such items as insurance premium discounts, prize drawings, and personnel day off (Hochart & Lang, 2011).

Hochart and Lang (2011) examined health care costs, utilization, and health risk for participants and nonparticipants in AHY. Participants included employee groups from

legal companies, schools, insurance company, municipalities, and manufacturing companies. While there was no statistically significant correlation with utilization of healthcare services and participation in AHY, those participating in the wellness program did have lower healthcare costs. Those who participated in all 3 years of the program maintained or improved their overall health risk level, although not statistically significant ( $p = 0.2864$ ). Forty-nine percent ( $n = 156$ ) of those in the high-risk category and 40% ( $n = 373$ ) of those in the medium risk category improved their risk level; however, specific interventions were not examined to determine those with the most impact on an individual's wellness. Those enrolled in the program saw significant improvements in their blood cholesterol levels ( $p = .000$ ) and blood pressure measurements as the percentage of individuals with normal blood pressure increased from 25.46% to 29.38% ( $p = .007$ ). There was no significant improvement in obesity, weight, and body mass index as the proportion of individuals enrolled in the program that had an ideal weight decreased from 32.5–28.9%. Lastly, they found that those who participated in the program saw a statistically significant savings in healthcare costs ( $p = 0.05$ ). This study's findings demonstrated long-term sustainability in a structured wellness program, which helps support the necessary financial investments that an organization must make in order for the program to be successful.

There is still much debate over what program interventions are most successful as measured by the highest ROI and improvement in employee health. Key is to design a program in which employees will participate at minimal cost to the employer. One successful intervention is the use of technology to help keep employees engaged in

wellness activities. Williams and Day (2011) used a quasi-experimental, pretest-posttest, treatment-comparison group study to examine the efficacy of an insurer based wellness software application. Six hundred forty three employers were enrolled in the Highmark wellness program (Williams & Day, 2011). Highmark's program consisted of a HRA, biometric screening (blood pressure, cholesterol, glucose), wide variety of educational topics, counseling with a dietician or health nurse, and a fitness component (walking program and gym membership, Naydeck, Pearson, Oziminkowski, Day, & Goetzel, 2008). This study was one of a few that used not only information collected from the wellness program such as HRA and biometric results, but also insurance claim information to determine overall health outcomes (Williams & Day, 2011). Participants were compared to nonparticipants. Participants had less overall medical expenses than nonparticipants ( $p < .01$ ). The participant group also had a higher rate of preventative service utilization than nonparticipants (Williams & Day, 2011). Highmark had a 4-year savings of \$1,335,524 compared with a program expense of \$808,403 (Naydeck et al., 2008). Healthcare expenses for participants in the Highmark employee wellness program were on average \$176 lower than those not participating in the wellness program (Naydeck et al., 2008).

### **Wellness Programs**

There are many different wellness programs in use, often built on the needs of the organization. An online interactive weight management program established at a business machine worksite provided food and weight tracking, online support, communication, education, and progress reports to employees (Petersen, Sill, Lu, Young, & Edington,

2008). Employees who enrolled in this internet-based program reduced their junk food intake by 20%, had a 12% reduction in prepackaged and fast food intake, and a 3% increase in eating breakfast. Obese employees decreased from 35.9% to 34.2%. There was also a general decrease in overall weight among participants. One year later, employees continued to move to a healthier weight and improved eating habits. This study was successful in reaching a large number of employees, as well as documenting the feasibility of using an online internet based wellness program to measure employee health outcomes.

Matzke et al. (2009) researched the use of a disease management program (disease prevention and management) using an observational study approach with two large employers of consumer goods. Claims data for over 200,000 employees were examined over a 4-year period. Both employers offered wellness programs, as well as disease management programs for employees with high claims and chronic illnesses. There were 55,000 enrollees in the disease management program intervention group. The program did see a reduction in admissions, but not in overall medical costs in the first year. While there were some research limitations, Matzke et al. suggested that wellness research studies may be too optimistic about financial savings and that there is a need to have a better-defined evaluation of such programs to show both short term and long-term outcomes.

Terry et al. (2008) examined wellness program best practices, as well as differences between best practice organizations (comprehensive approach) and common practice organizations (piecemeal approach), including health risk reduction among both

groups. They conducted a retrospective review on 22 organizations, all clients of StayWell Health Management, with 767,640 eligible employees. Organizations with comprehensive programs had 1.44 times higher levels of participation than common practice programs ( $p = .043$ ); participation in coaching was also higher in comprehensive programs; however, the difference between the best practice program mean (47.6) and the common practice program mean (33.8) was not statistically different ( $p = .122$ ).

Comprehensive programs had completion rates 1.71 times higher than common practice programs ( $p = .017$ ). Best practice organizations, defined as those with a comprehensive program design, management support, integrated incentives, comprehensive communication, dedicated staff onsite, multiple program options, health awareness programs, biometric screenings, and vendor integration, had better risk reduction results ( $p = .032$ ), often on average 2.35-1.08 times higher than common practice organizations. The review's findings support the importance of designing a comprehensive, best practice quality program in order to improve engagement levels and participant outcomes (Terry et al., 2008).

Linnan et al. (2008) examined overall organizational compliance among various companies with the Healthy People 2010 recommendation that 75% of workplaces offer a comprehensive wellness program. Linnan et al. examined organizational wellness programs, policies, practices, and services utilizing a cross sectional telephone survey among human resource directors and managers at various worksites with 50 to over 750 employees. Linnan et al. found that worksites with over 750 employees consistently offered more services and programs and had more healthy workplace policies than

smaller worksites. Only 6.9% of organizations had a comprehensive program in place; larger worksites (>750) were more likely to have a more robust program in place.

Worksites with dedicated staff on site, or a person responsible for health promotion were more likely to have a more comprehensive service.

Linnan et al. (2008) identified common barriers among staff in the success of the wellness program as: employee participation (63.5%), staff resources (50.1%), funding (48.2%), participation by high-risk employees (48%), and leadership support (37%).

There was no difference in barriers among different size worksites. HRAs were used in 19.4% of worksites. Only 11.3% of smaller organizations used HRAs, while 45.8% of larger size worksites (>750 employees) used HRAs ( $p < .001$ ). In terms of evaluating wellness program success, the majority (73.2%) used employee feedback, followed by employee participation (57.4%), workers' compensation claims (57.1%), health care claim costs (57%), and absenteeism (43.9%). Linnan et al. found the most common program activities included assistance programs and counseling (44.7%), back injury prevention (45%), stress management (24.9%), nutrition programs (22.7%), health consumerism programs (21.6%), and weight management programs (21.4%). Larger sites (>750 employees) were also more likely to provide disease management programs. In terms of worksite environment, 14.6% offered onsite fitness rooms, 13.5% trails, and 6.2% used signage to promote the use of stairs. Sites with larger numbers of employees (>750) were more likely to offer a supportive environment. Overall, 24% of worksites offered a cafeteria option to employees; again, larger worksites were more likely to have a more robust cafeteria. Thirty-seven percent of worksites noted that they labeled the

nutritional value of food sold in the worksite, while 5.6% offered health food choices.

Linnan et al. found that 12.4% provided employee fitness breaks while at work and 6.1% of worksites had policies in place to ensure that healthy food options were used with catering into the facility.

There were no statistically significant differences in terms of program type, activities, screenings, or work environment by the industry type. This study is important because it shows some of the differences among worksite size with respect to wellness offerings. Small businesses (<500 employees) represent 99.7% of all United States business and employ over 50% of the workforce (Linnan et al., 2008). Providing wellness programs at small organizations is an opportunity for improving the health of the workforce, as many employees do not currently have access to comprehensive wellness programs at small organizations (Linnan et al., 2008). Linnan et al. found that worksites with small numbers of employees are less likely and probably less able to provide comprehensive wellness promotion programs. Worksites with a dedicated wellness staff person onsite were more likely to have a comprehensive health promotion program. Linnan et al. demonstrated the depth of a comprehensive wellness service by outlining the range of services provided to the employee to not only promote individual health, but also organizational health.

### **Obesity**

Because of the vital issue of obesity as related to wellness of employees more research is being conducted on the effect obese or overweight employees have on healthcare costs, productivity, and absenteeism in the workplace. Colombi and Wood

(2011) used data from a single large industrial employer located at 29 different worksites employing over 15,000 employees in the United States to examine the impact of population obesity on care utilization and the cost of cardiovascular care in the workplace. Utilization of care included inpatient, outpatient, and prescription treatment related to all distinct episodes of care and related care for coronary artery disease, cerebrovascular disease, and hypertension. Colombi and Wood reviewed 179,708 care episodes from 2004 to 2007. They found that workplaces with high levels of obesity had 348.4 more episodes of care per 1,000 employees ( $p < .001$ ), 38.6 more hypertensive episodes per 1,000 employees ( $p < .001$ ), and 2.5 more cerebrovascular episodes per 1,000 employees ( $p = .017$ ). Colombi and Wood determined that worksites with high rates of obesity had \$223.2 greater cost per any episode of care ( $p < .001$ ); worksites with higher levels of obesity cost \$1250 more per employee than those with lower levels of obesity.

Lemon et al. (2009) used baseline data from a site specific randomized trial on weight gain prevention among hospital employees in an effort to determine the impact of the social environment on obesity, which includes organizational norms and values. The study participants included 899 employees from six member hospitals of the largest hospital system in Massachusetts. Employees' perceptions about coworker behaviors was also measured; there was variability among the responses with a range of 9.2% to 41.7% in response to questions regarding healthy habits, both nutritional and physical, among peers (Lemon et al., 2009). Lemon et al. found that men had lower perceived normative coworker eating habits ( $p < .001$ ) and that nurses, physicians, and physician assistants

had lower perceptions of organizational commitment to employee health than other job classes ( $p = .04$ ). Staff on third shift also had a lower perception of organizational commitment to employee health than other shifts ( $p = .67$ ).

Employees with a lower BMI had a higher perception of organizational commitment to employee health than those with a higher BMI ( $p = .03$ , Lemon et al., 2009). Employees who ate healthier tended to have a higher perception of coworker normative eating behaviors ( $p < .001$ ). The more physically active the employee, the higher degree of coworker normative physical activity behavior ( $p = .003$ ). The perception of a stronger organizational commitment to employee health was also associated with a lower BMI ( $p = .03$ ). Lemon et al. highlighted the importance of leadership support for wellness initiatives and for a healthy work environment.

Lemon et al. (2009) also supported the idea that employee behavior is influenced by worker health related values and norms, in other words, the culture of the organization is key to promoting health and wellness among employees. An individual's behavior may be influenced by co-worker behavior, attitude, and values. For example, night shift culture is more accepting of physical inactivity among peers and that the inactivity may be more of a norm among night shift employees because of work schedules, less flexibility, work-home conflicts, and increased fatigue (Lemon et al., 2009).

### **Long Term Outcomes**

Long-term program sustainability remains a potential limitation for organizational adoption of a comprehensive program. LeCheminant and Merrill (2012) evaluated the long-term sustainability of employer sponsored wellness initiatives for those enrollees for

over a 2-year period. The study population was a small-integrated engineering, science, and operations company in the United States. The 267 employees were encouraged to complete the HRA and participate in the annual WellSteps wellness program. The WellSteps employee program follows a behavior change framework that suggests more long-term behavior modification when wellness programs include awareness, education, motivation, skills, strategies, supportive policies and environments, and peers.

Approximately 80% of employees participated in at least one health initiative during the first two years; at the end of two years, employees requesting health-coaching services also increased from baseline. There were also significant improvements in health behaviors, specifically exercise ( $p < 0.001$ ) and dietary behaviors ( $p < 0.001$ ) over the 2-year period. This study supported the premise that robust wellness programs can improve the health of employees over the long term and success involves cultural transformation (LeCheminant & Merrill, 2012).

### **Rural Versus Urban Programs**

Bopp, Webb, and Fallon (2012) used an online survey to examine differences in health and wellness programs between faith based organizations (FBOs) using a convenience sample of faith based leaders across the United States. In the United States, 40% of the population attends a religious ceremony one or more times a week and another 20% attend two to four times a month (Bopp et al., 2012). The primary purpose was to examine differences between rural and urban FBOs for health promotion programs and activities, including types of programs and barriers to participation. The majority of respondents were white (93%), male (72%), middle age (53.2 years on average) and

Methodist (42.5%) or Lutheran (20.2%). In this study, 225 rural and 599 urban FBOs participated. In terms of organizational differences, rural FBOs were more likely to report offering no health and wellness activities ( $p = 0.04$ ), or fewer activities than urban FBOs ( $p < 0.001$ ). The urban FBOs offered more educational health classes, screenings, and health fairs than did urban based FBOs. Rural FBOs reported larger numbers of barriers to participation ( $p = .02$ ) including lack of leadership support and congregational interest ( $p = .001$ ), while the urban FBOs noted that other church activities conflicted with health and wellness programs ( $p = .003$ ) thus creating a barrier for participation. The research of Bopp et al. is important because it examines wellness differences among rural and urban areas. Findings confirm the premise that there is an underlying difference between urban and rural areas when it comes to attitudes, beliefs, and behaviors concerning health, wellness programs and participation.

### **Gaps in the Research**

Based on the literature review, it is evident that research is lacking on wellness programs at relatively small organizations. Baicker et al. (2010) noted that most studies have been conducted by large employers, as the large employers are more likely to have the resources to promote and provide wellness programs. Research is needed to determine the impact of wellness programs on small organizations (Baicker et al., 2010).

There are few researchers who examined wellness programs in organizations based in rural parts of the United States, including hospitals (Saleh, Alameddine, Hill, Darney-Beuhler, & Morgan, 2010). An organization's culture, employees, and leadership are critical to the success of an employer-sponsored wellness program (Kaspin et al.,

2013); therefore, research is needed in small rural hospitals to determine if the results are similar or different from wellness program participation in large hospitals.

Finally, there is variability among individuals and organizations when it comes to culture, behaviors, attitudes, and beliefs, all which impact wellness program development, content, and participation. It is important to understand differences among individuals and organizations in order to develop and implement wellness programs that have the most positive impact. The evidence obtained from a literature review supports the need for designing a robust employer sponsored wellness program; research shows employer sponsored wellness programs contribute to healthier employees.

### **Theoretical and Practice Models**

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, personal health perceptions, general health behaviors, health locus of control, self-motivation, and situational barriers. The Health Promotion Model (HPM) (Pender, Walker, Sechrist, & Frank-Stromborg, 1990; O'Quinn, 1995; Hallion & Haignere, 1998) was the theoretical model of choice for this descriptive correlational replication study as it provides the logical theoretical underpinnings to accomplish the research purpose.

### **Theoretical Models**

When designing a wellness program, it is important to take both the employee perspective and organizational culture into consideration. Pender's HPM helps to explain an individual's behaviors specific to optimizing his or her health and wellbeing

(O'Quinn, 1995). The HPM is based on social cognitive theory (O'Quinn, 1995). The HPM includes cognitive/perceptual factors, modifying factors, and variables that influence an individual's participation in health promoting activities (O'Quinn, 1995; Hallion & Haignere, 1998). The HPM focuses on health promotion without the threat of illness or disease as the determinant of behavioral changes (Pender, 2011).

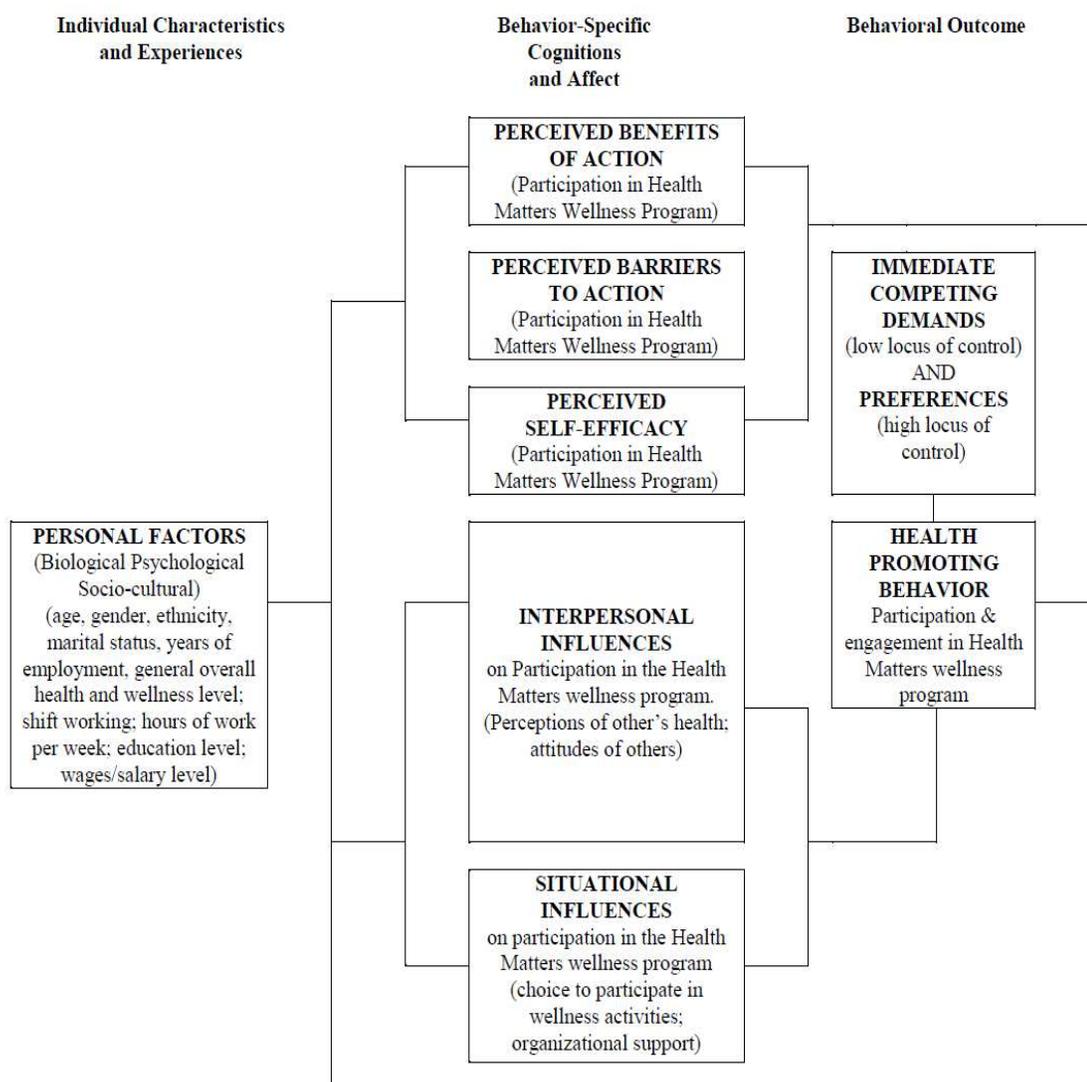
The HPM is inclusive of individual characteristics, behavior specific cognition and affect, and health promoting behaviors (Pender, 2011). It assumes that an individual's past experiences, personal characteristics, and behaviors influence an individual's engagement in health promoting behaviors. Therefore, individuals will perform a behavior that beneficial to them if they think they are able to perform the behavior. Individuals will also engage in behaviors that others have done or that others expect them to do in a particular environment (Pender, 2011). Pender believed one of the best determinants of future behavior is past behavior (Pender, 2011). Health promotion behaviors are motivated by an individual's desire to increase wellbeing and health potential; engagement in wellness activities provides an individual with health promotion behaviors. Behaviors are less likely to be done when there are competing priorities, or when the behavior is not deemed desirable by the individual (Pender, 2011).

The HPM has been used as a theoretical framework in several wellness program and health promoting behavior studies (Hallion & Haignere, 1998; Kaewthummanukul, Brown, Weaver, & Thomas, 2006; McElligott, Capitulo, Morris, & Click, 2010; O'Quinn, 1995; Pender et al., 1990). Kaewthummanukul et al. (2006) researched participation in exercise as related to personal factors as related to Pender's Health

Promotion Model. A statistically significant relationship was found between exercise and select personal factors, perceived benefits, barriers to exercise, perceived self-efficacy, and perceived social support ( $p < .0001$ ). McElligott et al. (2010) explored the effect of a holistic health program on the health promoting behaviors of hospital nurses. Using the Health Promoting Lifestyle Profile II instrument, a significant increase in overall mean ( $p = .02$ ), spirituality ( $p = .04$ ), interpersonal relations ( $p = .04$ ), and nutrition scores ( $p = .04$ ) was discovered among those participating in the holistic health promotion program (McElligott et al., 2010). Health promotion behaviors are motivated by an individual's desire to increase wellbeing and health potential; engagement in wellness activities provides an individual with health promotion behaviors. Using this model, interventions are targeted at improving the health of the population, which in this study are the employees in a rural healthcare organization.

The HPM provides a structure for examining influences on health promoting behaviors and provides guidance on effective interventions (Alkhalaileh et al., 2011). The HPM perceives each individual as unique and holistic; the individual continually interacts with both the interpersonal and physical environment with an emphasis on the active role of the individual in the quest for an improved state of health and wellness (Alkhalaileh et al., 2011). Individual experiences, cognitive behaviors, and behavioral outcomes are considered in this model (Alkhalaileh et al., 2011). McElligott et al. (2010) noted the HPM variables of perceived competence, health status, control of health, and definition of health to be instrumental in predicting health promotion in the workplace.

Pender's HPM was chosen for the framework of this study of employees in a small rural hospital in Ohio because the concepts of the model aligned well with the concepts in the instrument used by Hallion and Haignere (1998) and the purpose statement of this replication study. Key concepts in the HPM and the survey instrument include health locus of control, self-motivational health status and health behavior questions, situational questions, and socioeconomical and demographic questions (Hallion & Haignere, 1998). Pender's HPM components include individual characteristics and experiences, behavior specific cognitions and affects, and situational/interpersonal influences (Scrof & Velsor-Friedrich, 2006). Individual characteristics and experiences are essential factors that enlighten an individual's future behavior; however, these are often unmodifiable. The behavior-specific cognitions and affect category includes perceived benefits/barriers to a specific behavior, perceived self-efficacy, and affect cues to behavior (Scrof & Velsor-Friedrich, 2006) which were measured using the Hallion and Haignere instrument. Situational and interpersonal factors influence an individual's behavior (Scrof & Velsor-Friedrich, 2006) and were also measured using the Hallion and Haignere instrument. The HPM is integrative and takes into account an individual's experiences and characteristics, as well as their interaction with the environment and the influence those concepts have on an individual's behavior (Pender, 1990). An individual's knowledge of a potential hazard is related to the individual's perceived risk and self-efficacy (Polovich & Clark, 2012).



*Figure 1.* Health Promotion Model. Adapted with permission from “Predictors of Hearing Protection Behavior Among Firefighters in the United States,” by Hong et al., 2013, *International Journal of Behavior Medication*, 20, pp. 121-130, *Journal of Personality*, 64, p. 751.

### **Evidence Based Practice Model**

I used Pender’s HPM to support the development of the research study and subsequent revisions to the Hospital’s wellness program, Health Matters. This model will later be used to evaluate the wellness program. Future applications of the model may

focus on the evaluation of the overall wellness program based on specific employee wellness outcomes. The overall goal of the wellness program is to have employees use the program consistently while also realizing improvements in their health. The HPM can be used to evaluate overall program success.

### **Summary**

Based on a thorough literature review, successful wellness programs require a comprehensive approach based on the organization's culture and specific needs of potential participants (Baicker et al., 2010; Hochart & Lang, 2011; Robroek et al., 2009). Successful programs realize a positive ROI, as well as improved health and risk reduction for participants. In order for a wellness program to be successful, the participation rate must be high. This can be achieved by tailoring specific programs to the needs of the employees, as well as offering participant incentives. Though numerous studies have been conducted on wellness programs in large organizations, including large hospitals, no research on participation in wellness programs at small rural hospitals was located in the literature. Research is needed to evaluate the current wellness program at a rural hospital.

### Section 3: Methodology

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, perceptions about personal health, general health behaviors, health locus of control, self-motivation, and situational barriers. Along with evidence from other studies, the results were used to develop a comprehensive wellness program to meet the needs of employees at this rural hospital. This section addresses the research design, methods, target population, and sample size used in this study. It will also include details about the instrument used in the study, data analysis, and a plan for evaluating the project.

#### **Project Design**

I used a quantitative approach and a descriptive correlational design with secondary analysis of the data collected by the organization to evaluate its employee wellness program. The instrument used by the organization was designed by Hallion and Haignere (1998) and used at a large medical facility with an established wellness program. That study allowed me to build on existing knowledge and explore the potential for differences at a small rural hospital.

The organization modified the original instrument to best meet the goal of the hospital in gathering this information. The survey distributed by the organization was previously used by Hallion and Haignere (1998). It was a paper survey. The organization distributed the survey for completion by participants online via Survey Monkey software. The original survey's program contained the verbiage "from January to June", this was

removed because the rural hospital's program is all year. A question referring to specific wellness activities central to the Hallion and Haignere study setting was modified to include examples specific to the rural hospital setting. Two other questions were modified from questions that originally required interval data to answers that provided ordinal or nominal data. This improved the protection of the participants' identities. A question was modified to reflect the types of insurance plans applicable to the study setting, different from the original study.

### **Population and Sampling**

The study took place at a hospital in rural Ohio. The hospital employs 298 people ranging in age from 19 to 72 years; 33 males (11.1%) and 265 females (88.9%). The convenience sample included all individuals employed by the hospital, full time, part time, and casual part time. Those excluded from the study included people who serve at the hospital as volunteers, students, independent physicians, and those who are on medical leave during the data collection period. A survey was sent by the organization electronically through Survey Monkey software to all employees of the organization, including nursing, radiology, respiratory, housekeeping, dietary, human resources, billing, medical records, quality, revenue cycle, materials management, media/public relations, laboratory, pharmacy, security, maintenance, rehabilitation services (physical therapy, occupational therapy, speech therapy), Amish services, physicians, physician offices, and administration. The demographic survey is attached in Appendix A.

### **Sample Size**

G\*Power was used to identify the sample size for logistic regression (Faul, Erdfelder, Buchner, & Lang, 2009). With an assumption of the odds ratio of 1.8 (medium effect size), an alpha of .05, and a power of .80, the total sample size of 119 was yielded. I had 186 participants complete the survey instrument (62.4%). In this study, 128 participants generated usable data for logistic regression which exceeded the expectation of 119 participants. This study had enough power to detect the relationship between the predictors and wellness-programs participation.

### **Data Collection**

The hospital was responsible to oversee the entire survey and data collection process using the organization's policies and procedures. The survey instrument was sent from the Employee Health Nurse to employees. She also promoted the participation and completion of survey among employees. The Employee Health Nurse provided oversight to the Survey Monkey software process, provided administrative oversight to the survey, and got the raw unidentifiable data to me.

### **Instrument**

The hospital distributed a self-administered survey, developed, piloted, and used by Hallion and Haignere (1998) in a large urban hospital, and modified to fit the organization's setting. The validity and reliability of the instrument is detailed later in this paper. See Appendix A for the complete instrument. The six-section instrument is comprehensive; it contains socioeconomic and demographic questions, health status and health behavior questions, a health locus of control scale, situational questions, and a self-

motivational scale. Most of the questions are closed ended. The first portion of the survey (Questions 1-7) includes Likert questions regarding participants' overall perception of their current health and general health behaviors. Higher scores indicate less than desirable health habits.

Part 2 is an 11-item health locus of control scale in Likert format (Questions 8-18). It measures beliefs related to the prediction of healthy behaviors. The more that the participant agrees with the question, the higher the scoring. This section had a Chronbach's alpha reliability of 0.72 (Wallston, Wallston, Kaplan, & Maides, 1976 as cited by Hallion & Haignere, 1998; M.E. Hallion, personal communication, January 24, 2014). Wallston et al. also found acceptable concurrent validity and discriminant validity with the instrument.

Part 3 consists of a 20-question self-motivation inventory survey (Questions 19-38). Reliability was measured twice, the first time by Steinhart and the second by Wilson with Chronbach's alpha reliability of 0.88 and 0.86 respectively (Wilson, 1986, as cited by Hallion & Haignere, 1998). Dishman and Ickes (1981) determined both predictive and discriminate validity for the instrument.

Part 4 (Questions 39-43) includes six questions to examine the effect of employee's lifestyles on participation in the wellness program; these questions assess situational barriers and are answered using multiple-choice answers. Section 5 contains two questions (Questions 44-45) that assess the employee's access and engagement in other health and wellness programs outside of the organization. This section also contains a question for participants (Question 47) to determine which programs they participated

in; nonparticipants were asked reasons for not participating in the organization's wellness program Health Matters (Question 48). Section 6 (Questions 49-60) gathers demographic information such as age, sex, race, marital status, education, employment, salary, years of employment, shift, health coverage, and payment status (hourly, salary). The last question is open-ended and asked subjects to write in any other factors that may have affected their participation in the wellness program.

### **Survey Monkey**

The organization sent a letter of invitation (Appendix A) to participate and the survey electronically to all its employees via each employee's e-mail address using the Survey Monkey software program. Subjects indicated their consent to participate by completing the survey. I did not have access to, or contact with the Survey Monkey software program. I only received the responses to the survey from the organization.

### **Protection of Subjects**

The hospital where the survey was conducted does not have its own Institutional Review Board (IRB) to seek ethics approval for the study; however, the project was approved by the organization using their internal review process. Ethical approval for use of the data for secondary analysis was obtained through Walden University's IRB after the DNP project was approved. The Walden IRB approval number assigned to the study was 07-11-14-0329966.

It was critical that the organization informed the hospital employees of the importance of their feedback so that an appropriate wellness model can be developed and implemented. Employees were encouraged to participate with the goal to improve the

current wellness program at the hospital. The organization publicized the survey throughout the hospital in numerous ways: on posters throughout the hospital, verbal reminders during rounding by the employee health nurse, and by e-mails sent to each employee reminding them to complete the survey.

The employee health nurse was responsible to promote survey participation throughout the organization. The employees received frequent reminders to participate in the survey from her at staff meetings, on flyers, and through e-mail communication. The employee health nurse reminded employees during the survey period that participation is anonymous and that results would be used to improve the current program.

Because of the way Survey Monkey is constructed, no one was able to identify participants. Responses remained completely anonymous. Employees access their e-mail using unique individual passwords. The organization and I did not know who had or had not completed the survey. At the completion of the survey period, the organization sent individual anonymous results to me using the organization's e-mail system, which is secure and encrypted. I had my own login and password and my computer is password protected. Any paper data were kept in a locked file cabinet in my private office; I am the only person with access to the file cabinet.

### **Incentive to Participate**

The organization has promoted many other organizational surveys using Survey Monkey. The hospital was committed to maximum participation in this survey by its employees. In order to be respectful of the individuals completing the survey, the organization provided an incentive to participants because of the survey's length and time

required to complete it. If at least 50% of the hospital's employees completed the survey, ten \$50 gas cards were to be awarded. If that participation rate was achieved, everyone employed at the time of the survey was eligible for the drawing. Even if the person did not participate he or she was eligible for a gas card; everyone was eligible to protect the participants' anonymity. Because the participation rate was achieved, the organization provided \$50 gas cards to ten employees randomly selected by the employee health nurse.

### **Data Analysis**

Raw individual anonymous data were provided to me from the organization. The data analysis process included creating a codebook, data input, analysis, and data reporting. SPSS was used to run the data analysis portion of the study. Data analysis was completed similarly to the way Hallion and Haignere (1998) did their analysis. Data analysis included descriptive statistics, which included frequencies, mean scores, and standard deviation of each group and their associated demographic variables, situational barriers, health locus of control, self-motivation, health status, and locus of control (Hallion & Haignere, 1998). Hallion and Haignere also used chi square testing to determine if there were significant demographic differences between each group. Logistic regression was performed to predict the probability of an employee belonging to either the nonparticipant or participant group (Hallion & Haignere, 1998). Pearson  $r$  for correlations and independent  $t$  tests were also calculated between the participant and nonparticipant groups.

### **Project Evaluation Plan**

Pender's HPM was used to evaluate the progression of the wellness program over time. Pender's model was used to determine if health-promoting behaviors can be predicted using Hallion and Haignere's (1998) instrument, which aligns well with the HPM. The wellness project evaluation will include all activities from the start of the program through the presentation and approval of the proposed wellness model for the hospital. The HPM model will guide me to assure the project meets all goals and objectives and allows for revision of the project if necessary.

### **Summary**

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, personal health perceptions, general health behaviors, health locus of control, self-motivation, and situational barriers. This was a descriptive correlational study using data from an organizational survey by Hallion and Haignere (1998). The survey was completed by full, part, and casual employees at a small rural hospital. I conducted a secondary analysis of the data. Data was analyzed using logistic regression analysis.

Pender's HPM was used to evaluate the overall wellness program goals and objectives. Wellness program outcomes would be measured at some future time as the project is defined as the development of a wellness model for adoption in the organization. There are short term and long-term outcomes associated with the wellness program. Outcomes include such things as health risk assessment data, body mass index,

screenings completed, return on investment to the organization, and participant's weight. One of the most significant long-term outcomes to measure is the return on investment to the organization over 2 to 3 years.

Wellness and health are critical in today's environment, especially in lieu of recent changes associated with healthcare reform. These changes are bringing focus to population health and preventative measures. Organizations are looking for ways to minimize risk, reduce cost, and improve the health and wellbeing of their employees. Employer wellness programs can be an integral part of this as employees spend a large portion of their time at work. In addition, many of the chronic conditions present in today's society are preventable, or modifiable with proper treatment.

Section 4 is a summary and discussion of research findings, implications for practice, project strength and limitations, analysis of self, and a summary and conclusion.

#### Section 4: Findings, Discussion, and Implications

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, personal health perceptions, general health behaviors, health locus of control, self-motivation, and situational barriers. This section includes the following: results of data analysis, discussion of findings in the context of the literature and conceptual framework, implications for practice, implications for future research and social change, project strengths, limitations, and recommendations, analysis of self as scholar, practitioner, professional, and project developer, and conclusion.

##### **Description of Sample**

One hundred eight-six participants completed all or part of the survey for a response rate of 62.4%. Possible survey participants included: registered nurses, radiology technicians, respiratory therapists, personnel from housekeeping, security, maintenance, human resources, billing, and medical records departments, skilled professionals (business and revenue cycle departments), laboratory technicians, pharmacists, pharmacy technicians, rehabilitation professionals (physical therapists, occupational therapists, speech therapists, and therapy aides), physicians, and administrators. In protecting the anonymity of the survey participants, the researcher did not ask them to identify their occupation. In summary, the majority of participants were female ( $n = 148$ , 87.1%), Caucasian ( $n = 164$ , or 96.5%), married/living with a significant other ( $n = 135$ , 79.9%), within the age range of 40-59 years ( $n = 79$ , 67.1%), college graduates ( $n = 81$ , 47.6%), employed full time ( $n = 100$ , 59.2%), paid hourly ( $n = 136$ ,

81%), worked 8 hours per day ( $n = 98$ , 58.7%), worked day shift ( $n = 131$ , 78%), were insured ( $n = 161$ , 86.6%), and reported an annual income of \$70,000 or more ( $n = 76$ , 50.4%). The demographics of the survey participants are detailed in Table 1. Based on Pearson chi-square analysis of nominal variables, there was a statically significant difference between groups in terms of age ( $p = .046$ ). Varying totals mean that not all participants answered the survey question (indicated by \*).

Table 1

*Demographics of Survey Participants*

Variable	n (%)
<b>Age</b>	
18-29	33 (19.6)
30-39	44 (26.2)
40-49	34 (20.2)
50-59	45 (26.8)
>60	12 (7.1)
Total*	168 (100.0)
<b>Sex</b>	
Female	148 (87.1)
Male	22 (12.9)
Total	170 (100.0)
<b>Race</b>	
Caucasian	164(96.5)
Other	6 (3.5)
Total*	170 (100.0)
<b>Marital Status</b>	
Married/Living with partner	135 (79.9)
Single/Living alone	34 (20.1)
Total	169 (100.0)
<b>Education</b>	
High school	23 (13.6)
Some college or technical	39 (22.9)
College graduate	81 (47.6)
Post graduate	27 (15.9)
Total*	170 (100.0)
<b>Employment Status</b>	
Full Time	100 (59.2)
Part Time	69 (40.8)
Total	169 (100.0)
<b>Paid Status</b>	
Salary	32 (19.0)
Hourly	136 (81.0)
Total*	168 (100.0)
<b>Years Employed</b>	
<10 years	108 (64.3)
11-20 years	39 (23.2)
>21-30 years	21 (12.5)
Total*	168 (100.0)
<b>Hours Worked/Day</b>	
8	98 (58.7)
10	22 (13.2)
12	34 (20.4)
>12	13 (7.8)
Total*	167 (100.0)
<b>Shift</b>	
Day	131 (78.0)
Other	37 (22.0)
Total*	168 (100.0)
<b>Insurance</b>	
Insured	161 (86.6)
Not insured	25 (13.4)
Total*	168 (100.0)
<b>Income</b>	
\$10,000-\$39,999	28 (18.5)
\$40,000-\$69,999	47 (31.1)
\$70,000-\$99,999	42 (27.8)
>\$100,000	34 (22.6)
Total*	151 (100.0)

Based on Pearson chi-square analysis of nominal variables, there was a statically significant difference between groups in terms of age ( $p = .046$ ) and the subsequent likelihood of being more or less likely to participate, or not participate in the wellness program because of age. None of the other demographic variables were statistically significant different based on participation and nonparticipation in the hospital's Health Matters program.

### **Hospital Wellness Program Participation**

Approximately 29% of the participants indicated that they attended Health Matters, the wellness programs offered at the hospital. The main reasons cited for not attending were the inconvenience of scheduled times ( $n = 51, 33.6\%$ ) and lack of interest in the program(s) offered ( $n = 31, 20.4\%$ ). Six percent of the respondents noted that they were unaware of the program(s). Some of the respondents provided more than one reason for not participating in the wellness programs. Additional comments written in on the survey instrument as reasons for non-participation in the hospital's wellness program included pets at home, family obligations, club and organizational memberships, sleep, and shift ending at midnight. Table 2 shows details of participation in the Health Matters wellness program. A question was asked about employee attendance at other health and wellness programs outside of the hospital with 25.3% of survey participants reporting participation in a wellness program outside of the hospital's program. An independent samples  $t$  test revealed no statistically significant difference of means between those who

participate in the hospital's wellness program and those who participate in another wellness program outside of the hospital.

*Table 2*

*Frequencies of Hospital Wellness Program Attendance and Reasons for Nonattendance*

	<i>n</i>	%
Attendance		
Yes	49	28.8
No	121	71.2
Total	170	100.0
Reasons for not participating (some had more than 1)		
Did not know about the program	9	5.9
Not interested	31	20.4
No one I knew was going	3	2.0
Too busy	35	23.0
Times not convenient	51	33.6
Other (not specified)	23	15.1
Total	152	100.0

### **Comparisons Between Wellness Program Participants and Nonparticipants**

#### **Perceptions of Health Status and General Health Behaviors**

Survey participants responded to three questions on perceptions of their health status and four questions related to health behaviors. These seven items were combined to provide a score of overall health. Higher scores indicated better health and healthier habits. Tables 3 and 4 display the frequencies of responses comparing hospital wellness program participants to nonparticipants. In terms of overall health, 58.3% of program participants and 71.9% of program nonparticipants reported they were in good health; both groups reported that their health had stayed the same over the past 6 months (participants 81.6%; nonparticipants 77.7%). Program participants and program nonparticipants both reported occasional stress. Fifty-five percent of program participants

perceived their weight as underweight/normal weight, while only 40% of program nonparticipants reported being underweight/normal weight. In both groups, the majority of survey participants reported exercising once or twice a week. Both program participants and program nonparticipants reported an average dietary fat intake (63%). Tobacco use among both program participants and nonparticipants was relatively low, as 93.6% of program participants and 95.8% of nonparticipants reported not using tobacco. The section sample mean (standard deviation) was 15.3 (2.10), with an observed range of 9-20 points, on a potential range of 6-21. Wellness program participants' mean score was 15.76 (1.90) and nonparticipants' was 15.12 (2.11). An independent samples *t* test revealed no statistically significant difference of means between the two groups ( $p = .073$ ). The Cronbach's alpha for this scale was .42.

*Table 3*

*Frequencies of Health Status Perceptions: Participants Versus Nonparticipants*

	Participants <i>n</i> (%)	Nonparticipants <i>n</i> (%)
Perception of Overall Health		
Excellent	17 (35.4)	29 (24.0)
Good	28 (58.3)	87 (71.9)
Fair	3 (6.3)	4 (3.3)
Poor	0 (0.0)	1 (0.8)
Perception of Health Previous Six Months		
Improved	8 (16.3)	22 (18.2)
Stayed the same	40 (81.6)	94 (77.7)
Worsened	1 (2.0)	5 (4.1)
Perceived Stress Levels		
Occasional stress	33 (67.3)	71 (59.2)
Frequent stress	12 (24.5)	37 (30.8)
Constant stress	4 (8.2)	12 (10.0)
Perceived Weight Classification		
Normal/Underweight	26 (55.3)	47 (39.5)
Slightly overweight	16 (34.0)	46 (38.7)
Very overweight	5 (10.6)	26 (21.8)

Table 4

*Frequencies of General Health Behaviors: Participants Versus Nonparticipants*

	Program Participants <i>n</i> (%)	Program Nonparticipants <i>n</i> (%)
Exercise		
3 times a week or more	24 (49.0)	43 (35.5)
1-2 times per week	17 (34.7)	48 (39.7)
Less than once per week	8 (16.3)	23 (19.0)
Did not exercise	0 (0)	7 (5.8)
Estimated Dietary Fat Intake Over Past Six Months		
Low dietary fat	16 (33.3)	30 (25.6)
Average dietary fat	30 (62.5)	74 (63.2)
High dietary fat	2 (4.2)	13 (11.1)
Tobacco Use		
Yes	3 (6.4)	5 (4.2)
No	44 (93.6)	115 (95.8)

**Health Locus of Control Scale**

Survey participants answered 11 questions on beliefs related to their health locus of control. The section sample mean (standard deviation) was 34.9 (5.34), with an observed range of 19-56 points, on a potential range of 11-66 (Wallston et al., 1976). Wellness program participants' mean score was 33.75 (5.88) and nonparticipants' was 34.24 (5.14). An independent samples t-test showed that there were no statistically significant differences of means between the hospital wellness program participants and nonparticipants ( $p = .598$ ); therefore, the data are presented in Table 5 in aggregate. Cronbach's alpha for this scale was .48.

Table 5

*Frequencies of Responses on Health Locus of Control Scale: Entire Sample*

Question	Strongly Agree <i>n</i> (%)	Somewhat Agree <i>n</i> (%)	Agree <i>n</i> (%)	Disagree <i>n</i> (%)	Somewhat Disagree <i>n</i> (%)	Strongly Disagree <i>n</i> (%)
If I take care of myself, I can avoid illness	12 (6.7)	9 (5.0)	4 (2.2)	52 (29.1)	43 (24.0)	59 (33.0)
Whenever I get sick it is because of something I've done or not done	11 (6.2)	28 (15.7)	76 (42.7)	27 (15.2)	34 (19.1)	2 (1.1)
Good health is largely a matter of good fortune	1 (0.5)	23 (12.4)	17 (9.6)	84 (47.2)	27 (15.2)	26 (14.6)
No matter what I do, if I am going to get sick I will get sick	0 (0.0)	22 (12.4)	30 (16.9)	73 (41.0)	38 (21.3)	15 (8.1)
Most people do not realize the extent to which their illnesses are controlled by accidental happenings	2 (1.1)	25 (14.2)	65 (36.9)	57 (32.4)	20 (11.4)	7 (4.0)
I can only do what my doctor tells me to do	1 (0.6)	9 (5.1)	8 (4.5)	99 (55.6)	18 (10.1)	43 (24.2)
There are so many strange diseases around that you never know how or when you might pick one up	5 (2.8)	52 (29.2)	52 (29.2)	48 (27.0)	16 (9.0)	5 (2.8)
When I feel ill, I know it is because I have not been getting the proper exercise or eating right	7 (3.9)	20 (11.2)	79 (44.1)	28 (15.6)	43 (24.0)	2 (1.1)
People who never get sick are just plain lucky	0 (0.0)	15 (8.4)	15 (8.4)	98 (55.1)	27 (15.2)	23 (12.9)
People's ill health results from their own carelessness	10 (5.6)	34 (19.2)	51 (28.8)	16 (9.0)	64 (36.20)	2 (1.1)
I am directly responsible for my own health	5 (2.8)	2 (1.1)	7 (3.9)	76 (42.5)	46 (25.7)	43 (24.0)

**Self-Motivation**

Survey participants answered 20 questions on the about their self-motivation and behavior. Self-motivation may help to predict perseverance with specific behaviors and treatments (Dishman & Ickes, 1981). Table 6 displays the frequencies of responses comparing hospital wellness participants to nonparticipants. The section sample mean (standard deviation) was 53.0 (5.68), with an observed range of 37-71 points, with a potential range of 20-100. Wellness program participants' mean score was 52.54 (6.86) and nonparticipants' was 53.09 (5.22). An independent samples *t* test showed that there were no statistically significant differences of means between the participants and nonparticipants ( $p = .588$ ); therefore, the data are presented in Table 6 in aggregate. The Cronbach's alpha for this scale was .31.

Table 6

*Frequencies of Responses on the Self-Motivation Inventory: Entire Sample*

	Very uncharacteristic of me <i>n</i> (%)	Somewhat characteristic of me <i>n</i> (%)	Not sure <i>n</i> (%)	Somewhat characteristic of me <i>n</i> (%)	Very characteristic of me <i>n</i> (%)
I can persevere at stressful tasks, even when they are physically tiring or painful	5 (2.9)	7 (4.0)	9 (5.2)	79 (45.7)	73 (42.2)
If something gets to be too much of an effort to do, I'm likely to just forget it	88 (50.9)	47 (27.2)	12 (6.9)	21 (12.1)	5 (2.9)
I'm really concerned about developing and maintaining self-discipline	15 (8.7)	15 (8.7)	18 (10.4)	78 (45.1)	47 (27.2)
I don't work any harder than I have to	118 (67.8)	49 (28.2)	1 (.6)	5 (2.9)	1 (.6)
I seldom work to my full capacity	117 (67.2)	34 (19.5)	8 (4.6)	11 (6.3)	4 (2.3)
I'm just not the goal-setting type	84 (48.6)	56 (32.4)	10 (5.8)	18 (10.4)	5 (2.9)
I'm willing to work for the things I want as long as it's not a big hassle for me	77 (44.3)	54 (31.0)	13 (7.5)	18 (10.3)	12 (6.9)
I have a lot of self-motivation	6 (3.5)	12 (6.9)	7 (4.0)	73 (42.2)	75 (43.4)
I get discouraged easily	57 (32.8)	66 (37.9)	9 (5.2)	36 (20.7)	6 (3.4)
I don't like to over extend myself	67 (38.7)	59 (34.1)	16 (9.2)	23 (13.3)	8 (4.6)
I tend to lack feeling or emotion	108 (62.4)	33 (19.1)	6 (3.5)	12 (6.9)	14 (8.1)
I like to take on jobs that challenge me	7 (4.1)	16 (9.3)	14 (8.1)	74 (43.0)	61 (35.5)
I change my mind about things quite easily	41 (23.6)	84 (48.2)	13 (7.5)	30 (17.2)	6 (3.4)
I have a lot of will power	6 (3.4)	29 (16.7)	15 (8.6)	67 (38.5)	57 (32.8)
Things just don't matter much to me	112 (65.9)	42 (24.7)	7 (4.1)	6 (3.5)	3 (1.8)
I avoid stressful situations	22 (12.7)	53 (30.6)	29 (16.8)	60 (34.7)	9 (5.2)
I never force myself to do things I don't feel like doing	55 (32.0)	75 (43.6)	10 (5.8)	24 (14.0)	8 (4.7)
It takes a lot to get me going	65 (37.6)	63 (36.4)	19 (11.0)	18 (10.4)	8 (4.6)
Whenever I reach a goal, I set a higher one	4 (2.3)	33 (19.1)	24 (13.9)	81 (46.8)	31 (17.9)
I can persist in spite of failure	8 (4.6)	16 (9.2)	12 (6.9)	83 (47.7)	55 (31.6)

### **Situational Barriers**

Survey participants responded to five questions on situational barriers. The frequencies of responses comparing hospital wellness program participants to nonparticipants are detailed in Table 7. Ninety-eight percent of program participants drove home alone, almost identical to the percentage of nonparticipants; travel time to work was also similar for both groups. More participants had dependents at home than nonparticipants. Seventy-six percent of participants had a second job, much higher than nonparticipants (24%). The section sample mean (standard deviation) was 6.3 (2.68), with an observed range of 2-13points, on a potential range of 3-18. Wellness program participants' mean score was 6.43 (3.15) and nonparticipants' was 6.29 (2.48). An independent samples *t* test revealed no statistically significant difference of means on the Self-Motivation Inventory between the two groups ( $p = .768$ ). The Cronbach's alpha for this scale was .21. Based on Pearson chi-square analysis of nominal variables, there was a statically significant difference between groups in terms of responsibility for children/elders ( $p = .047$ ) and shift worked ( $p = .016$ ).

Table 7

*Frequencies of Responses on Situational Barriers: Participants Versus Nonparticipants*

	Program Participants <i>n</i> (%)	Program Nonparticipants <i>n</i> (%)
Travel Home From Work		
Drive home alone	47 (97.9)	115 (95.8)
Walk	0 (0)	4 (3.3)
Picked up by someone	1 (2.1)	1 (.8)
Time to Travel Home From Work		
1 to 15 minutes	16 (32.7)	43 (35.8)
16 to 25 minutes	12 (24.5)	28 (23.3)
26 to 35 minutes	7 (14.3)	28 (23.3)
36 to 45 minutes	9 (18.4)	10 (8.3)
46 minutes or more	5 (10.2)	11 (9.2)
Dependents at Home		
Yes	25 (51.0)	48 (39.7)
No	24 (49.0)	71 (58.7)
Percentage of Responsibility for Dependents		
100% someone else	1 (2.1)	15 (12.6)
75% someone else; 25% mine	1 (2.6)	8 (6.7)
50% someone else; 50% mine	7 (14.6)	28 (23.5)
25% someone else; 75% mine	11 (22.9)	24 (20.2)
100% mine	6 (12.5)	6 (5.0)
None	22 (45.8)	38 (31.9)
More Than One Job		
Yes	92 (76.0)	29 (24.0)
No	31 (63.3)	18 (36.7)

### **Predictors of Wellness Program Participation**

Logic regression analyzes relationships between a dependent variable and multiple independent variables (Polit & Beck, 2012). Sequential logistic regression was used to examine predictors of wellness program attendance (yes or no). Based on the conceptual model in Figure 1, the first block of independent variables included overall health and personal factors: age, sex, race, marital status, education, employment status, paid status, years of employment, hours worked per week, work shift, insurance, and income (Table 8). The  $n$  for the regression analysis was 126, which represents the number of completed instruments.

Results showed that two independent variables were statistically significant predictors of wellness program participation: overall health and payment status (salaried versus hourly wage). Participants with hourly payment were 7.6 times (odds ratio =  $1/.131 = 7.6$ ) less likely to engage in the wellness program than those with salary payment (Wald = 5.53,  $p < .05$ ), controlling for other predictors. Participants who perceived better overall health status were more likely to participate in the programs than those who perceived worse overall health ( $B = .426$ ; Wald = 7.06,  $p < .01$ ), taking other variables into account. The overall model explained 46.9% of the variance in wellness program attendance. The Hosmer and Lemeshow value ( $\chi^2 = 3.25$ ,  $p > .05$ ) also supported the goodness-of-fit of the model. Table 8 displays detailed results of personal predictor variables of wellness program participation.

Table 8

*Predictors of Wellness Program Participation Using Sequential Logistic Regression (n = 126): Block 1*

Predictor	B	SE	Wald	x	p	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Age 18-29	1.003	1.412	.504	1	.478	2.725	.171	43.401
Age 30-39	.203	1.422	.020	1	.886	1.225	.075	19.901
Age 40-49	-1.756	1.415	1.541	1	.215	.173	.011	2.765
Age 50-59	.874	1.259	.482	1	.488	2.397	.203	28.284
Age > 60 <sup>(RG)</sup>								
Sex (Male)	1.249	.931	1.800	1	.180	3.488	.562	21.639
Race (non Caucasian)	.275	.946	.084	1	.771	1.316	.206	8.400
Marital status (alone)	.229	.331	.478	1	.489	1.257	.657	2.406
Education (high school)	1.829	1.354	1.825	1	.177	6.230	.438	88.554
Education (some college)	1.655	1.206	1.881	1	.170	5.231	.492	55.655
Education (college grad)	1.357	1.078	1.586	1	.208	3.886	.470	32.137
Education (post college grad) <sup>(RG)</sup>								
Employment status (part time)	.216	.480	.202	1	.653	1.241	.484	3.178
Payment status (hourly)	-2.032	.864	5.526	1	.019*	.131	.024	.713
Years of employment <10	-23.466	40192.737	.000	1	1.00	.000	.000	-23.466
Years of employment 11-20	-21.821	40192.737	.000	1	1.00	.000	.000	-21.821
Years of employment >20 <sup>(RG)</sup>			5.485	3	.140			
Hours worked/week 8	-.996	1.042	.915	1	.339	.369	.048	2.845
Hours worked/week 10	-.325	1.286	.064	1	.801	.723	.058	8.994
Hours worked/week 12	-.212	.999	.045	1	.832	.809	.114	5.728
Hours worked/week >12 <sup>(RG)</sup>								
Shift (afternoon/night)	.658	.430	2.342	1	.126	1.930	.831	4.482
Insurance (not insured)	.068	.128	.282	1	.596	1.070	.833	1.375
Income \$0	19.763	40192.970	.000	1	1.00	3826412	.000	.
Income \$10,000-39,999	1.057	1.100	.924	1	.336	2.879	.333	24.861
Income \$40,000-69,999	.595	.903	.434	1	.510	1.813	.309	10.650
Income ≥\$100,000 <sup>(RG)</sup>								
Overall Health	.426	.160	7.061	1	.008**	1.530	1.118	2.095

Note 1: Hosmer and Lemeshow  $\chi^2 = 3.25$ ,  $p = .918$ , Nagelkerke  $R^2 = .469$ ; Note 2: \* =  $p < .05$ ; \*\* =  $p < .01$

Note 3: <sup>(RG)</sup> = Reference Group

Again, based on the conceptual model of this study (Figure 1), behavior-specific cognitions and affect (self-motivation) and immediate competing demands/preferences (situational barriers & health locus of control) were added in the logistic regression model in block 2. Results in Table 9 show that neither health locus of control, self-motivation, situational barriers were not statistically significant predictors of wellness program participation. However, overall health and payment status were statistically significant (Table 9). Participants who perceived better overall health status and healthy behaviors were more likely to participate in the programs than participants who perceived worse overall health and unhealthy behaviors ( $B = .413$ ; Wald = 5.53,  $p < .05$ ). Participants with hourly payment were almost 10 times (odds ratio =  $1/.102 = 9.8$ ) less likely to engage in the wellness program than those with salary payment (Wald = 5.81,  $p < .05$ ), controlling for other predictors. The overall model yielded 51.8% of the explained variance in wellness program attendance. Once again, the Hosmer and Lemeshow value ( $\chi^2 = 11.35$ ,  $p > .05$ ) indicated the goodness-of-fit of the model. Note that the Hosmer and Lemeshow  $\chi^2 = 11.35$ ,  $p = .183$ , Nagelkerke  $R^2 = .518$ ; Note 2: \* =  $p < .05$ ; Note 3: <sup>(RG)</sup> = Reference Group.

Table 9

*Predictors of Wellness Program Participation (n = 126): Block 2*

Predictor	B	SE	Wald	df	p	Exp(B)	95% CI for Exp(B)	
							Lower	Upper
Age 18-29	1.282	1.582	.657	1	.418	3.605	.162	80.087
Age 30-39	-.450	1.612	.078	1	.780	.638	.027	15.019
Age 40-49	-2.517	1.614	2.432	1	.119	.081	.003	1.909
Age 50-59	1.310	1.448	.818	1	.366	3.705	.217	63.322
Age > 60 <sup>(RG)</sup>								
Sex (Male)	1.546	1.025	2.275	1	.131	4.692	.629	34.973
Race (Non Caucasian)	.017	.929	.000	1	.985	1.018	.165	6.291
Marital status (Alone)	.218	.344	.403	1	.525	1.244	.634	2.441
Education (High school)	2.178	1.557	1.957	1	.162	8.831	.417	186.779
Education (Some college)	1.613	1.346	1.436	1	.231	5.016	.359	70.109
Education (College grad)	1.671	1.194	1.959	1	.162	5.316	.512	55.170
Education (Post college grad) <sup>(RG)</sup>								
Employment status (Part time)	.270	.520	.270	1	.603	1.310	.473	3.628
Payment status (Hourly)	-2.279	.945	5.813	1	.016*	.102	.016	.653
Years of employment <10	-24.691	40192.953	.000	1	1.00	.000	.000	-24.691
Years of employment 11-20	-22.980	40192.953	.000	1	1.00	.000	.000	-22.980
Years of employment >20 <sup>(RG)</sup>								
Hours worked/week 8	-.912	1.129	.652	1	.420	.402	.044	3.676
Hours worked/week 10	.388	1.461	.070	1	.791	1.474	.084	25.841
Hours worked/week 12	.213	1.167	.033	1	.855	1.238	.126	12.178
Hours worked/week >12 <sup>(RG)</sup>								
Shift (Afternoon/night)	.720	.466	2.383	1	.123	2.054	.823	5.126
Insurance (Not insured)	.097	.141	.471	1	.493	1.102	.835	1.454
Income \$0	20.750	40192.970	.000	1	1.00	1026960	.000	.
Income \$10,000- 39,999	1.001	1.204	.691	1	.406	2.720	.257	28.788
Income \$40,000- 69,999	.587	.975	.362	1	.547	1.798	.266	12.142
Income ≥\$100,000 <sup>(RG)</sup>	.980	.922	1.131	1	.288	2.666	.438	16.241
Overall Health	.413	.176	5.525	1	.019*	1.511	1.071	2.132
Health locus of control	.041	.050	.659	1	.417	1.042	.944	1.150
Self-motivation	.111	.058	3.694	1	.055	1.117	.998	1.251
Situational barriers	.203	.140	2.114	1	.146	1.225	.932	1.611

Finally, the third logistic regression model (Table 10) showed that the predictors included in this study yielded 81.7% correct classification of non-participants and participants in the wellness program used for this study. Although there is no specific cut-off value for the percentage of correct classification, 81.7% is a relatively high (Polit & Beck, 2012).

*Table 10*

*Percentage of Correct Classification Between Hospital Wellness Program Participants and Nonparticipants*

Observed	Predicted			Percentage correct
	Wellness program attendance			
	No	Yes		
Wellness program attendance	No	81	7	92.0
	Yes	16	22	57.9
Overall Percentage				81.7

## **Discussion of Findings in Context of Study Setting and in Comparison With Research Literature**

### **Rural Versus Urban**

One of the gaps noted in the literature review was the lack of current extensive research on wellness programs in rural areas, as well as general health habits, attitudes, behaviors, and outcome differences between rural and urban areas, particularly with respect to employer wellness programs. Research is also lacking on the cultural difference between the two distinct areas. By better understanding cultural differences, one can better plan healthcare needs, particularly those attributes that are necessary for a comprehensive employer wellness program with a high rate of participation. In general,

there are some differences between rural and urban areas. According to the National Rural Health Association (NRHA, 2014), residents living in rural areas face greater economic, cultural, social, educational disparities than urbanites. For example, rural areas have one-tenth the number of physicians despite having one-fourth of the population (NRHA, 2014). Rural residents also tend to be poorer, earning approximately \$7500 less per year than their urban counterparts (NRHA, 2014). The NRHA reported that 24% of children living in rural areas live in poverty. These along with many of the other disparities can lead to inequalities in healthcare among rural residents, or entrenched beliefs and behaviors specific to healthcare and wellness programs. When planning health and wellness programs, these differences need to be understood in order to develop a program that fits the needs of the organization and its employees, thus increasing participation and improving employees' health.

### **Amish/Anabaptist Culture**

In order to better understand the research results it is important to have knowledge of the community from which the study sample came. I believe the unique culture of the society plays a large role in the behaviors, attitudes, and beliefs regarding health and wellness. While there are currently no practicing Amish employed by the hospital, there are a large number of employees who grew up Amish or Anabaptist, or who still practice some of the Anabaptist traditions. The county in which the study site hospital is located is home to the largest settlement of Amish, in the United States, with estimates of over 32,630 Amish in the county (Hurst & McConnell, 2010; Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). While the Amish comprise only 1%

of the population in the United States, they are still known for their distinctive culture (Kraybill, Johnson-Weiner, & Nolt, 2013). The Amish church came to life in 1693 under the direction of Ammann and soon Amish families immigrated to the United States (Kraybill et al., 2013). The Amish hold strong Christian beliefs in their daily life practices with the church central to the community (Kraybill et al., 2013). There is a strong sense of community and deep commitment by Amish members to one another. Typically, they are group oriented, meaning decisions are sometimes reached by consensus of the group, which is typically a church group or family (Graham & Cates, 2006). Amish closely follow the Ordnung, or written traditions of their district specific sect, daily in order to separate them from the modern world (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014).

Amish tend to separate themselves from the outside world (Kraybill et al., 2013). The Amish help one another within their church and often do not accept or participate in government-aided programs (Kraybill et al., 2013). Children do not become members of the church until they voluntarily join in their late teens or early 20s; 85% become baptized Amish, thus making a lifelong commitment to the church and Amish way of life (Kraybill et al., 2013). Some Amish do leave the church and conservative way of life but do not forget their roots (Kraybill et al., 2013).

One of the central values of the Amish culture calls for members to yield to a higher authority (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). This way of life calls for simplicity, humility, and discourages individuality and prideful living; modernistic lifestyle choices are discouraged (Young

Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). Members are taught humility, obedience, and respect for others (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). There is a strong emphasis on respecting God's will and the Amish are taught to respect and obey those with authority (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). Those that abide by the church rules and follow God's way are taught they will achieve eternal life (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). Through humility, the Amish are seen as patient individuals and are often satisfied with not having all the answers (Kraybill et al., 2013).

Even though Amish men serve as the spiritual head of the household, Amish women often share in the household decision making and child rearing practices (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). The Amish have large families, with an average of five children per family (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). The Amish immediate family, as well as extended family provides a strong social support system for the family (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). Amish typically do not use skilled nursing facilities, instead opting to take family members home to be cared for (Julia Klink, Nurse Manager, personal communication, December 5, 2014). Family members help one another through emergencies and the elderly typically live with their family member who cares for them until their death (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). Historically, Amish have farmed the land on which they live; however, with large

families and scarce land and resources, many Amish have turned to other sources of income (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). This may include business/shop owners, construction, and factory work. The Amish do practice leisure activities and most are centered on the outdoors and include activities such as fishing, skating, hunting, social activities, and swimming (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014).

When defining health among the Anabaptist, several key themes have been identified. These themes include the importance of being healthy, ability to continue to work hard, freedom to enjoy life, family responsibility, and physical and spiritual wellbeing (Armer & Radina, 2006). Amish are often viewed as hardworking disciplined people. Being able to work and contribute to the Amish community is highly valued among the Amish, while illness is often characterized by the inability to work (Armer & Radina, 2006; Weyer et al., 2003). These beliefs may cause the Amish to delay seeking care and many do not actively practice modern preventative medicine (Weyer et al., 2003).

Health and wellness practices and beliefs vary somewhat between Amish districts and one must be careful not to generalize among all districts. When compared to non-Amish, the Amish are less likely to seek and use medical services and are also less likely to use heroic measures, or interventions that prolong life or control the body; these measures are often thought of as obstructing God's will (Kraybill et al., 2012; Graham & Cates, 2006; Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). Likewise, the verbalization of symptoms may be minimized because the person

may feel like they are complaining against God's will. Amish tend to use a complement of resources and treatments including folk, alternative, standard care, and community-church based healthcare (Kraybill et al., 2013; Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). The Amish have high regard and respect for traditional remedies (Kraybill et al., 2013). Often these beliefs are traditions and practices passed on among generations from elders, often those who have suffered the same healthcare problem previously. They are seen as having knowledge about the subject (Kraybill et al., 2013). There are some beliefs among the Amish that certain individuals have the ability to heal by touch or prayer (Weyer et al., 2003). Alternative therapy includes such things as the use of reflexologists, acupuncture, unlicensed midwives, natural supplements, herbs, and vitamins. While the Amish will use modern healthcare providers, they also visit reflexologists and chiropractors (Kraybill et al., 2013; Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014). According to Kraybill et al., (2013), many Amish use alternative treatments because of the high touch and low-tech appeal. Amish are sometimes reluctant to discuss the use of alternative treatment, as the English often do not approve of such nonconventional treatments (Kraybill et al., 2013). Standard resources include the use of modern medical treatments and physicians. Community-church resources include the frequent visitation of church and family members to ill patients, often thought to cure illness (Kraybill et al., 2013). Much of this can be explained through their emphasis on God's will and yielding to a higher power.

Most Amish participate in the Amish church funds, or mutual aid programs to help pay for healthcare and most healthcare is paid for in cash (Kraybill et al., 2013). Amish members pay a specific monthly fee to the church and the church helps to cover the cost of healthcare for its members. At times, cost and convenience limit access to healthcare and to treatment (Kraybill et al., 2013). Because of the high cost of healthcare, the Amish are cost conscience and may shop for services, thus not always go to the closest healthcare facility for treatment. The Amish often make healthcare choices based on the lowest cost provider or more conservative treatment modality in order to avoid high cost healthcare (Kraybill et al., 2013). This reinforces the strong sense of community over individualism and caring for members of the community among the Amish faith. There is no formal regulation regarding healthcare, rather decisions, attitudes, behaviors, and beliefs are shaped by tradition, family, extended family, elders, ordained leaders, and informal church leaders (Young Center for Anabaptist and Pietist Studies at Elizabethtown College, 2014).

The Amish have some specific beliefs regarding immunizations, birthing, and refusal of care. The role of the government, faith in God's will, preference for natural healing methods, and responsibility for one's self help to shape some of these beliefs (Kraybill et al., 2013). The decision to vaccinate or not is often left to the family; however, vaccination rates are lower among the Amish as opposed to the English, (Kraybill et al., 2013) non-Amish or non-Anabaptist community members. Over the years, Amish districts have seen outbreaks of various diseases because of the reluctance to vaccinate (Kraybill et al., 2013). With respect to birthing, many of the Amish have

home births, use nonlicensed midwives, or a birthing center (Kraybill et al., 2013). At times, the Amish may refuse medical care because of the belief in God's will and promotion of natural healing methods. There have been some legal cases involving the refusal of care among the Amish with courts ordering certain medical treatments to occur, even if they are against the parent's wishes (Kraybill et al., 2013). For this reason, many of the Amish fear that the government may impose their modern western views and decisions regarding healthcare on them (Kraybill et al., 2013).

The Anabaptist culture and traditions help to shape the beliefs, attitudes, and behaviors related to health and wellness. I believe it is important to not underestimate the influence that the Anabaptist culture and traditions have on healthcare and wellness. Many of the hospital employees grew up with some type of Anabaptist influence, thus shaping their beliefs, behaviors, and attitudes (employee health nurse, personal communication, December 17, 2014). I will continue the discussion of findings while incorporating some of the more specifics of the Anabaptist culture and traditions into the discussion to help explain the survey findings.

### **Survey Participant Demographics Compared to Organizational Demographics**

The purpose of this study was to determine how hospital employees participating in the hospital's wellness program differ from nonparticipants in demographics, perceptions of health, health locus of control, self-motivation, and situational barriers as a replication study of Hallion and Haignere (1998). The participants in the study were most likely to be Caucasian, female, married or living with significant other, have a reported household income of \$40,000-\$69,999, work day shift, and were between the ages of 50-

59 years. Results in Table 11 show the survey participant demographics compared to demographics of employees of the organization. The survey participants are representative of the demographics of the organization's employees. One difference is the highest frequency of survey participants were of the 50-59 year age range (26.8%) while the 30-39 year age range represents the age group with the highest number of employees in the organization (26.5%). The demographics of sex, age, race, marital status, employment status, and shift were consistent in both the survey participants and organization's employees' demographics. While the majority of survey participants and hospital employees are hourly employees (81% and 88% respectively), almost 90% of the hospital's salaried employees completed the survey instrument. The majority of survey respondents and employees in the organization have been employed less than ten years. Most survey participants and employees work an 8-hour shift. The organization's records do not note any employee working over 12 hours per day; but, 13 survey participants (7.8%) noted that they worked over 12 hours a day. The majority of survey participants (86.6%) and hospital employees (73.5%) noted they were insured; however, hospital records showed that 26.5% of employees are not insured while only 13.4% of survey respondents noted they were not insured. The variance between the survey participants and hospital demographics may be explained in that some employees do not select hospital coverage; therefore, their status remains unknown to the organization falsely increasing the number that is not insured. The organization did not have aggregate data on education levels and overall income. Organizational demographics provided by the benefit coordinator (personal communication, October 30, 2014).

Table 11

*Survey Participant Demographics Versus: Organization Demographics*

Variable	Survey Participants <i>n</i> (%)	Organizational Demographics† <i>n</i> (%)
<b>Age</b>		
18-29	33 (19.6)	65 (21.8)
30-39	44 (26.2)	78 (26.5)
40-49	34 (20.2)	56 (18.8)
50-59	45 (26.8)	74 (24.8)
>60	12 (7.1)	25 (8.4)
Total*	168 (100.0)	298 (100.0)
<b>Sex</b>		
Female	148 (87.1)	265 (88.9)
Male	22 (12.9)	33 (11.1)
Total	170 (100.0)	298 (100.0)
<b>Race</b>		
Caucasian	164(96.5)	297 (99.6)
Other	6 (3.5)	1 (0.3)
Total*	170 (100.0)	298 (100.0)
<b>Marital Status</b>		
Married/Living with partner	135 (79.9)	229 (76.8)
Single/Living alone	34 (20.1)	49 (16.4)
Total	169 (100.0)	278 (100.0)
<b>Education</b>		
High school	23 (13.6)	NA
Some college or technical	39 (22.9)	NA
College graduate	81 (47.6)	NA
Post graduate	27 (15.9)	NA
Total*	170 (100.0)	NA
<b>Employment Status</b>		
Full Time	100 (59.2)	160 (53.7)
Part Time	69 (40.8)	116 (38.9)
Total	169 (100.0)	276 (100.0)
<b>Paid Status</b>		
Salary	32 (19.0)	36 (12.0)
Hourly	136 (81.0)	262 (87.9)
Total*	168 (100.0)	298 (100.0)
<b>Years Employed</b>		
<10 years	108 (64.3)	210 (70.5)
11-20 years	39 (23.2)	63 (21.1)
>21-30 years	21 (12.5)	25 (8.4)
Total*	168 (100.0)	298 (100.0)
<b>Hours Worked/Day</b>		
8	98 (58.7)	145 (48.7)
10	22 (13.2)	15 (5.0)
12	34 (20.4)	138 (46.3)
>12	13 (7.8)	None known
Total*	167 (100.0)	298 (100.0)
<b>Shift</b>		
Day	131 (78.0)	191 (64.1)
Other	37 (22.0)	107 (35.9)
Total*	168 (100.0)	298 (100.0)
<b>Insurance</b>		
Insured	161 (86.6)	219 (73.5)
Not insured	25 (13.4)	79 (26.5)
Total*	168 (100.0)	298 (100.0)
<b>Income</b>		
\$10,000-\$39,999	28 (18.5)	NA
\$40,000-\$69,999	47 (31.1)	NA
\$70,000-\$99,999	42 (27.8)	NA
>\$100,000	34 (22.6)	NA
Total*	151 (100.0)	NA

### **Hospital Wellness Program Participation**

Only 29% of those participating in the survey were actively engaged in the hospital's wellness program, Health Matters. This percentage is similar to results in other studies including those with hospital employees and nonhospital employees (Bright et al., 2012; Ganter, 2012; Hallion & Haignere, 1998; Person et al., 2010; Robroek et al., 2009). Robroek et al., in a systematic review of 23 studies, found participation rates between 10%-64% with a median of 33%. Person et al. found participation rates of only 10.4% which was similar to Hallion and Haignere's results (10.8%). The hospital's participant demographics were also similar to those of Middlestadt et al. (2011) with the majority of participants being female, Caucasian, and 40 years of age and older.

### **Program Participation Barriers**

Study participants cited the inconvenience of time (33.6%) and lack of interest (20.4%) in the program(s) as reasons for not participating in the hospital's wellness program. Hallion and Haignere (1998) cited too busy and times not convenient as reasons for not participating in the program. Person et al. (2009) found similar barriers to participation including insufficient incentives, inconvenient locations, time limitations, no interest, schedule issues, and health beliefs. Bright et al. (2012) found that employees noted work schedules (63.7%), being too busy at work (40.2%), and not feeling like it was feasible to leave work to attend a wellness activity (18.2%) as barriers to participation.

Unlike other businesses, hospitals are open 24/7, meaning hospital employees work various shifts and hours which may make it difficult for employees to participate in

wellness programs. Programs scheduled during work hours are often difficult for employees to attend because of the inability to leave the unit because of lack of staffing, changes in assignments, or the unpredictability of patient care (employee health nurse, personal communication, October 30, 2014). This is similar to the findings by Bright et al. (2012) who cited work schedules, being too busy at work, and the inability to leave work to attend a wellness program. Having a second job could also be a factor for not participating in the hospital's wellness program as 24% of wellness program nonparticipants stated they had a second job; a majority of survey respondents, both participants and nonparticipants, noted an obligation to a second job (71%).

### **Perception of Health Status**

Analysis of this survey yielded no statistically significant differences in perception of health status between wellness program participants and nonparticipants. In this study, perception of health status is not a factor related to wellness program participation. Overall, the majority of survey participants reported their perception of health to be either excellent (27.2%) or good (68%). Most reported that their health has either improved (21.4%), or stayed the same over the past six months (94.2%). Niessen et al. (2013) found that employees who viewed their health as less than optimal or moderate were less likely to participate in wellness programs.

The Anabaptists tend to define their health by the ability, or inability to work (Weyer et al., 2010). If an employee with an Anabaptist background is able to work, the employee may not view his or her health as less than desirable, or negatively. In terms of stress, 9.5% of the survey participants reported constant stress and 29% reported frequent

stress levels. Stress can negatively impact an individual's health and wellness. Clark et al. (2011) found a significant difference between employees with lower stress levels and overall mean health score. In their study, high stress levels were synonymous with high blood pressure, high cholesterol, and high blood glucose levels (Clark et al., 2011). In addition, employees with higher stress levels tended to have less healthy nutritional habits and support for a healthy lifestyle (Clark et al., 2011).

Stress can cause poor work performance, higher health care costs, poor quality of life, and decreased engagement (Clark et al., 2011). According to Ganter (2012), stress costs the \$300 billion annually, including physician office visits and lost productivity at work. Many of the programs in the research do not provide employees with stress management as part of the wellness program activities and stress related health and mental issues are often initially misdiagnosed. Employees with high levels of stress are often the least likely to participate in such programs because of lack of support, decreased confidence levels, and other health problems (Clark et al., 2011). As a cultural group, the Amish and Anabaptists tend to report lower levels of stress, which could be attributed to their tight social network, or humble personality (Fuchs et al., 1990). Thirty-seven percent of the survey participants also reported that they were slightly overweight while 26% reported that they were very overweight. In general, people tend to under report or under estimate their true weight (Nawaz, Chan, Abdulrahman, Larson, & Katz, 2001). This may mean that survey participants are more overweight than previously self-reported in the survey; further solidifying the need for a comprehensive program that engages employees to participate.

## **General Health Behaviors**

Analysis of this survey data yielded no statistically significant differences in general health behaviors between wellness program participants and nonparticipants. Therefore, in this sample, general health behaviors are not a factor related to wellness program participation. The majority of survey respondents reported exercising three times a week or more (39.4%); 38.2% of survey respondents exercised one to two times a week. Results showed that 22.4% of survey participants either did not exercise, or exercised less than once per week. This provides an opportunity for the organization to improve exercise habits among employees.

A fundamental characteristic of the Anabaptist culture is hard work and determination; therefore, there may not be an emphasis on exercise outside of what is done in the normal workday. Exercise may seem as more of a nonnecessity. It is important to consider that self-reported exercise frequency among Anabaptist tends to run lower than that of their English counterparts; leisure time is also less frequent among the Anabaptist than English counterparts (Levinson, Fuchs, Stoddard, Jones, & Mullet, 1989). One explanation for this is that the Anabaptists tend to engage in physical work whether on the farm, or in a shop; this can be related to their culture and tradition in which a heavy emphasis is placed on hard work and the value it brings to the community.

In terms of tobacco use, 95% of survey participants reported they did not use tobacco. This finding is also congruent with other research of Anabaptists and the use of tobacco; tobacco use is less among Amish than non-Amish (Graham & Cates, 2006; Levinson et al., 1989). Levinson et al. found that 11% of Amish men noted that they

currently smoke and 22% have tried tobacco; the rates for English men are 26% and 55%. Ferketich et al. (2008) conducted a study in the same geographic location as the wellness program study reported in this paper. Those researchers found the prevalence of tobacco use among Amish men to be 18% which was significantly lower than English from the same area (39%,  $p = .04$ ), as well as US rates (32%,  $p = .005$ ). Ferketich et al. reported that no Amish women reported using tobacco. That study used self-reported data, which were then verified with a biochemical indicator to detect the presence of nicotine. Results of tobacco use may be lower because the use of tobacco is discouraged among the Anabaptists (Ferketich et al., 2008).

### **Health Locus of Control**

Analysis of the wellness program survey yielded no statistically significant differences in health locus of control between wellness program participants and nonparticipants. In this sample, health locus of control is not a factor related to wellness program participation. This finding is similar to the original study by Hallion and Haignere (1998). I was unable to find any other recent studies connected to employee wellness program participation and health locus of control.

While there were no statistically significant differences between wellness program participants and nonparticipants, there are some interesting findings about health locus of control nonetheless. Eighty-six percent of survey participants either disagreed, somewhat disagreed, or strongly disagreed that if they took care of themselves, they could avoid illness. In addition, 84% of survey participants responded that people do not realize the extent to which their illness is caused by accidental happenings. This would

parallel with the Anabaptist culture and tradition yielding to God's way, meaning that individuals quietly accept what is given to them without contesting as it is God's way (Kraybill et al., 2013; Weyer et al., 2003). Anabaptist religious and cultural beliefs result in different health perceptions and behaviors when compared to the English (Armer & Radina, 2006). Many Anabaptists believe that sins cause sickness, thus no amount of medicine or care will prevent or improve the illness (Weyer et al., 2003). The majority of survey participants (92%) felt they are directly responsible for their own health which, coincides with the Anabaptist culture of being responsible and humble (Kraybill et al., 2013). Finally, 90% of the survey respondents felt that they could only do what their physician directed them to do to, which can be explained by the fact that many of the survey participants are caregivers, often following physician orders and teaching patients to follow physician orders. There is a great deal of respect and authority for the physician in the Anabaptist culture.

The literature is lacking when it comes to current studies based on locus of control and wellness programs. An individual's feelings of control can influence physical and mental health (Menec & Chipperfield, 1997; Oberle, 1991 as cited by Valentine, Godkin, & Doughty, 2008). Locus of control is related to wellness behaviors (Valentine, Godkin, & Doughty, 2008). Valentine et al. examined cultural identity, acculturation, health beliefs, and control among Hispanics. Individuals with an external health locus of control was found to be positively related to perceived health barriers, which means those individuals had greater health control barriers (Valentine et al., 2008). This study is important because it highlights the importance of understanding an individual's cultural

characteristics when seeking to understand and educate individuals regarding their health attitudes and behaviors (Valentine et al., 2008).

### **Self-Motivation Inventory**

Analysis of survey data yielded no statistically significant differences in self-motivation inventory between wellness program participants and nonparticipants. In this sample, self-motivation is not a significant factor related to wellness program participation. This finding is congruent with the research conducted by Hallion and Haingere (1998). When reviewing participant responses in the self-motivation inventory, the responses show a higher degree of perseverance, effort, discipline, self-motivation, and work effort (Table 6). These findings parallel with the Anabaptist culture, way of life, and tradition; many of these concepts are found in the Amish culture (Kraybill et al., 2013).

I further analyzed survey responses to gain a better understanding of the organizational culture with respect to survey participants. For example, 88% of survey respondents felt that they could persevere at stressful tasks even when they are physically tiring or painful. Also, 78% reported that if something took too much effort, they would continue on and not forget about the task. An overwhelming 96% reported working harder than they have to, or rather than is what is expected of them. In similar fashion, 87% of survey participants stated that it is very uncharacteristic or somewhat uncharacteristic of them to seldom work to their full capacity. Over two-thirds of respondents stated it was very uncharacteristic or somewhat uncharacteristic of them to not like overextending themselves. The majority of survey participants (78%) reported

they liked to take on jobs that challenged them; almost 80% of respondents felt they could persist in spite of failure. These findings are similar to the characteristics and traditions of perseverance, effort, discipline, self-motivation, determination, and work effort; these characteristics are deeply engrained among the Anabaptist culture which is prevalent in the community.

### **Situational Barriers**

Analysis of survey responses yielded a statistically significant difference between participants and nonparticipants in terms of responsibility for children/elders ( $p = .047$ ) and shift worked ( $p = .016$ ) in the situational barriers section of the instrument. Hallion and Haingere's (1998) study yielded different results in situational barriers; a statistically significant difference between groups for hours worked per shift and the method the employee used to travel to and from work. The majority of survey participants (79%) in this Ohio study lived within 35 minutes of the hospital, which would imply that they live within the county. Well over two-thirds of survey respondents reported working more than one job. This alone would minimize the time available for participation in a wellness program, specifically programs that are scheduled during nonwork times. Inconvenience of time and lack of interest in the program(s) were main reasons for not participating. This finding is similar to studies by Bright et al. (2012), Linnan et al. (2008), and Person et al. (2010). Having dependents at home was not significant for participation or nonparticipation in Health Matters.

### **Predictors of Wellness Program Participation**

Collectively, the regression model shows that payment status (hourly versus salaried) and overall health were statistically significant for predicting participation in the hospital's wellness program (Table 8 & Table 9). Wellness program participants had better overall health and healthy behaviors than nonparticipants. This finding is consistent with the current research in that employee wellness programs tend to attract those employees that are healthier and more health conscious (Haynes & Helms, 2001; Kaspin et al., 2013; Middlestadt et al., 2011). Haynes and Helms found that 80% of wellness program participants engaged in regular exercise; this compares to 65% of nonparticipants. Kaspin et al. (2013) found that employees with a strong motivation for improving their health increased participation levels. These findings are similar to research by Middlestadt et al. (2011) who found that attitude toward wellness and health statistically significant in determining participation ( $p < .001$ ). There is an opportunity for the organization to engage those employees who are not currently practicing healthy lifestyles. This is discussed below in the recommendations section. Payment status was also a predictor of wellness program participation, particularly salaried employees are more likely to be involved in Health Matters. Salaried employees could include management positions, human resources, billing, revenue cycle, and some other office positions in the organization. Reasons for higher participation among these types of employees could be because of working a straight day shift position with no rotating shifts, more consistent schedule, and more flexibility with their schedule.

### **Results Compared to Hallion and Haignere Survey**

Table 13 shows some of the chi-square values for the Hallion and Haignere (1998) survey compared with the rural Ohio Hospital study. There were differences among both hospitals in terms of the population and sample, thus further solidifying the need to consider the organization's culture when developing an employee wellness program. In addition, the rural hospital sample was more heterogeneous than the replicated study, which was conducted in an urban area. Differences in results between the research by Hallion and Haignere and this current study would further support the research that an organization's culture is an integral component of wellness program participation and that there are differences between rural and urban hospitals when it comes to employees and wellness. The table contains the results of chi-square for significance of difference for health questions, situational variables, employment variables, and categorical demographic variables between the Hallion and Haignere survey and the current hospital survey

Table 13

*Results of Chi-Square for Significance of Difference*

Variable	Hallion and Haignere Survey				$\chi^2$	P	Current Hospital Survey				$\chi^2$	P
	Participants		Nonparticipants				Participants		Nonparticipants			
	n	%	n	%			n	%	n	%		
<b>Health Improvement</b>					8.7	.01*					.569	.752
Improved	28	18.1	12	8.7			8	4.7	22	12.9		
Stayed same	109	70.3	117	84.8			40	23.5	94	55.3		
Gotten worse	18	11.6	9	6.5			1	0.6	5	2.9		
<b>Smoker</b>					7.0	.01*					.364	.546
No	138	89.9	107	77.5			44	26.3	115	68.9		
Yes	17	11.0	31	22.5			3	1.8	5	3.0		
<b>Weight</b>					8.7	.03*					4.378	.112
Underweight	9	5.8	1	0.7			-	-	-	-		
Normal weight	49	31.6	59	43.1			26	15.7	47	28.3		
Slightly overweight	74	47.7	57	41.6			16	9.6	46	27.7		
Very overweight	23	14.8	20	14.5			5	3.0	26	15.7		
Missing	-	-	1	.7								
<b>Other Factors leave work</b>					3.8	.05*					.004	.952
No	112	75.7	113	85.0			39	23.1	96	56.8		
Yes	36	24.3	20	15			10	5.9	24	14.2		
Missing	7	4.5	5	3.6			-	-	-	-		
<b>Employee Status</b>					12.7	.01*					.695	.404
Full time	129	83.2	94	68.1			26	15.4	74	43.8		
Part time	18	11.6	29	21.0			22	13.0	47	27.8		
Per Diem	5	3.2	14	10.1			-	-	-	-		
Consultant	2	1.3	1	0.7			-	-	-	-		
Missing	1	0.6	-	-			-	-	-	-		
<b>Payment status</b>					14.4	.01*					.007	.932
Salary	51	32.9	22	16.1			9	5.4	23	13.8		
Hourly	101	65.2	115	83.9			39	23.4	96	57.5		
Missing	3	1.8	1	0.7								
<b>Hrs/Shift</b>					7.9	.05*					3.958	.266
8 hours	98	63.6	84	64.1			22	13.3	75	45.2		
10 hours	32	20.8	15	11.5			7	4.2	15	9		
12 hours	23	14.9	32	24.4			13	7.8	21	12.7		
Missing	2	1.2	7	5.1			5	3.0	8	4.8		

\*p &lt; .05

### **Discussion of Findings in Context of Theoretical Framework**

I used Pender's (2011) health promotion model as the conceptual framework for the study. Pender's model focuses on individual's unique characteristics and experiences, behavior specific cognitions and affect, and health promoting behaviors. The health promotion model includes the following variables: individual characteristics and personal factors, perceived benefits of action, perceived self-efficacy, activity related effect, interpersonal influences, situational influences, commitment to a plan of action, immediate competing demands and preferences, and health promoting behavior.

With respect to Pender's (2011) health promotion model, two out of four (overall health and payment status) modifying variables were significant for determining participation in the hospital's wellness program. Individual characteristics and experiences (payment status and overall health) is supported by this study as being a significant determinant of participation in the hospital's wellness program. According to Pender, an individual's past experiences, characteristics, and behaviors influence an individual's engagement in health promoting behaviors. With the large population of Anabaptists and Amish within the community, there is a strong reliance on tradition and past experiences, which ultimately can influence an individual's engagement in health promoting behaviors.

Perceived barriers to action (situational barriers), perceived self-efficacy (self-motivation inventory), and interpersonal and situational influences (locus of control) were also measured. These variables were not found to be statistically significant in determining participation in the hospital's wellness program. Activity related effect,

interpersonal influences, situational influences, commitment to a plan of action, immediate competing demands and preferences, and health-promoting behavior were not directly measured in this research study.

### **Implications**

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, personal health perceptions, general health behaviors, health locus of control, self-motivation, and situational barriers. The information from the study was used to revise and refine the hospital's wellness program, Health Matters. The new model was presented to the hospital's senior leadership team for approval and subsequent implementation.

From this study, it is clear that there needs to be consideration for and understanding of the characteristics and culture of the community when designing and implementing wellness and health promotion activities (Levinson et al., 1989). This community not only includes the worksite community, but also the communities in which the employees live. As Levinson et al. noted, cultures vary in terms of needs, motivations, priorities, beliefs, and attitudes. The Amish/Anabaptist culture contrast is vast enough that this should be considered when designing a wellness program at the hospital. While this study opened the door to some of the differences in wellness attitudes, beliefs, and behaviors among rural employees, there is still much to be learned about rural and urban wellness programs.

## **Program Implications**

The findings from this research study will help the hospital, as well as others, understand employee attitudes, beliefs, and behaviors towards wellness programs and help predict participation and nonparticipation among employees in rural areas.

Understanding employee behaviors, culture, beliefs, traditions, and attitudes is a fundamental concept in the development and implementation of a comprehensive wellness program that attracts high rates of employee participation (Ganter, 2012). The development of a comprehensive wellness program that meets the needs of the employees at the hospital where the data collection took place can help to reduce health risk factors and chronic disease conditions among employees. In turn this will reduce health costs and improve the overall long-term health of the employees. Findings from this study were synthesized along with findings from the review of current evidence-based literature to develop recommendations to revise the current wellness program.

Research is lacking on participation in wellness programs at relatively small rural healthcare organizations. Most studies have been conducted at large employers, as the large employers are more likely to have the resources to promote and provide wellness programs (Baicker et al., 2010). Implementing the findings and understanding employee preferences and reasons for participation and nonparticipation can help to improve the current program, thus improving the overall health of employees within the organization. I did find that overall health and payment status were predictors of wellness program participation, as well as child/elder care at home, age, and shift worked. I kept these

significant variables in mind when making recommendations for the hospital's wellness program.

### **Recommendations**

It is critical that organizations take a comprehensive approach to employee wellness in order to meet the health and wellness needs of the employees, as well as engage employees to participate in the program. Identifying and implementing strategies to address employee preferences and perceived barriers will help employees to achieve better health and well-being, thus improving organizational outcomes related to employee health and health behaviors (Person et al., 2010). A successful employer sponsored wellness program requires employee participation; therefore, there must be careful consideration in addressing the perceived behaviors among hospital staff in order to improve participation and improve health outcomes.

In developing specific recommendations and a model for wellness for the hospital, I used results from the research study, as well as evidence based practice findings. The next section will highlight the main elements necessary for a successful comprehensive wellness program and healthy workplace. One of the first steps is to create an organizational culture of health through leadership support. Ganter (2012) noted that the organizational culture must support the individuals; therefore, it is important that there be organizational support and resources available in order to make the program successful. I suggest a leadership plan for small incremental changes to the wellness program over the next two years in order to not overwhelm employees. The plan, purposeful and methodical, will gradually introduce the employees to the wellness and

health concepts, while at the same time providing the infrastructure in the environment to support the employees. This climate of health is one in which healthy lifestyle choices and workplace activities are supported and promoted throughout the organization (Ganter, 2012).

According to Ganter (2012), these activities must be integrated into the hospital's daily operations to improve employee participation, in other words, become the way of life within the organization. It is not just about improving the health of individuals in the organization, but also includes transforming the organization into a healthy place to work. It is also critical to have leadership support from the beginning; the culture must clearly articulate that health and wellness are of the highest priorities in the organization (Arena et al., 2013; Ganter, 2012; Justice, 2013). This includes not only support for the program, including financial support, but also participation at all levels of the program. In other words, leaders must walk the talk. Leadership must also determine a budget for the wellness program. Leadership must develop a vision for a healthy workplace and workforce with measureable goals that are evaluated over time.

One of the next strategies is to hire a wellness coordinator for the organization who will work with the employee health nurse in program design, implementation, promotion, and evaluation. The candidate should have a degree in wellness or exercise science, with a specialization in health promotion activities. Previous experience, while not necessary, would be an added benefit. I suggest the organization hire its own rather than contract the service out with a wellness organization. The main reason is that with the unique cultural beliefs, attitudes, and behaviors, the organization will best know how

to design programs to attract, engage, and sustain employee participation. For example, there is low participation among males at the hospital, the wellness coordinator could work to find programs that would appeal to male employees. In this study, age was determined to be significant in participation or nonparticipation, again the wellness coordinator could work to develop key programs to attract employees at different age ranges.

As the main provider of healthcare services, I believe there is an opportunity for the organization to provide wellness services to some of the local businesses. The wellness coordinator should be hired as soon as possible so that this person can have input into the design of the program. I cannot stress enough the importance of designing a comprehensive wellness program specific to the needs of the employees, as there is no one size fits all approach (Ganter, 2012). The program should be simple, yet engaging to the employees (Justice, 2013). The program should be customized to meet the needs of the organization and the wellness coordinator would have a good understanding of the organization's demographics and cultural needs in order to develop a comprehensive program. In addition, it is critical to have a supportive full-time employee health nurse to help support employee health activities. I will also suggest changing the title to employee wellness nurse to promote the concept of health and wellness among all employees in the organization (Ganter, 2012). The wellness coordinator and employee wellness nurse can work collaboratively to champion wellness activities among employees in the organization.

I recommend the creation of a scorecard, or dashboard, with key metrics for ongoing review and program evaluation. These metrics could include such things as workplace injuries, absenteeism rates, program participation rates, aggregate weight and weight loss, aggregate biometric screening results, employee stress level, engagement and connectivity score, cost of insurance claims, cost of workers' compensation claims, and return on investment. In addition, there should be monthly updates to the leadership team with respect to the dashboard results and annual aggregate HRA results outlining the top health concerns for the organization based on employee results.

Wellness activities and program components can be divided into four different categories. These activities include: screening, prevention, health promotion, and other wellness benefits (Mattke et al., 2013). Screening activities include such activities as identification of risk through the HRA and biometric screening (Mattke et al., 2013). Prevention strategies are done to mitigate risk and include such activities as weight loss counseling, diet teaching, and other counseling (Mattke et al., 2013). Health promotion help to further healthy lifestyles and include healthy meal and vending options, immunization clinics, or monthly exercise or wellness challenges such as a walking contest (Mattke et al., 2013). Health promotion activities lead to long-term behavior changes with benefits realized over the long term. Finally, other wellness benefits include such things like occupational health and safety programs to promote worksite safety (Mattke et al, 2013).

Employee risk factors must be identified on an annual basis through the completion of the HRA (Justice, 2013; Marzec et al., 2013). The majority of wellness

programs utilize a HRA (Mattke et al., 2013). These data would remain confidential; however, aggregate health data can be shared by the wellness coordinator and employee wellness nurse to the leadership team. These data can be used with respect to wellness program planning and activities such as lunch and learns or wellness challenges. It is important that the data be tracked and trended over time to show patterns and demonstrate a ROI, as well as outcomes. I recommend the organization develop a consistent tool and process for collecting the HRA data on an annual basis that is pertinent to the employee population.

Individual data would be reviewed by the wellness coordinator and/or employee wellness nurse with counseling and risk modification strategies initiated as appropriate. These counseling sessions would remain confidential and would promote health related behaviors including nutrition, exercise, and healthy lifestyle choices (Mattke et al., 2013). Some of these programs would be lifestyle management programs targeted at preventing chronic disease while others would be disease management programs targeting employees with chronic illness such as heart disease, cancer, diabetes, and respiratory problems (Mattke et al., 2013). Programs would be tailored to meet the specific needs of the individual.

A robust wellness program includes the collection of biometric data. Biometric data can include waist circumference, blood pressure, height, weight, body mass index, fasting blood glucose, and cholesterol levels. I suggest tracking and trending the data over time to show outcomes. This data would remain confidential and only aggregate data available to the leadership team. Employees would receive a copy of their HRA

results and a counseling session with the employee wellness nurse, wellness coordinator, or practitioner. Those employees with opportunities to improve their health and wellness would collaborate with the wellness nurse, coordinator, or practitioner to create their own individual action plan.

I recommend a variety of health promotion activities including on site vaccination clinics, fitness benefits, and healthy food options (Mattke et al., 2013). These options are becoming more popular and offered by approximately 40% of organizations offering wellness programs (Mattke et al., 2013). Nutrition and exercise are two of the core building blocks of health and wellness. These were also two areas that were identified as opportunities for hospital employees from previous HRA summaries (employee health nurse, personal communication, October 30, 2014). The current study supports this as 60.6% of the study participants do not exercise at least three times per week. Individuals with a more sedentary lifestyle have higher rates of heart disease and metabolic conditions (Arena et al., 2013).

Previous exercise is a strong predictor of future exercise (Abraham, Feldman, Nyman, & Barleen, 2011; Haynes & Helms, 2001; Middlestadt et al., 2011). I also found that employees who had a perception of better overall health were more likely to participate in the employee wellness program, again supporting the research that employees with healthy lifestyles tend to have higher rates of participation. Again, the opportunity is for the organization to engage those who may not have healthy lifestyles now to make small progressive changes in health and wellness behaviors. Employees must understand the importance of exercise on their health. Exercise programs should

contain both individual and group programs and should include traditional exercise with more modern exercise regimens, while keeping consistent with the Anabaptist culture (Mattke et al., 2013).

Kruger et al. (2007) suggested offering shorter classes throughout various times and days of the week in order to increase participation. The hospital recently took on the management of a local medical fitness center. I recommend employees receive reimbursement for gym usage of up to 50% of the annual cost if the employee attends at least 12 times a month for 12 consecutive months. This would reward the employee for developing healthy habits over time. Other initiatives may include changes to the physical environment in order to promote health promotion such as installing walking paths or indoor walking circuits (Mattke et al., 2013). This path can be used by employees during breaks, lunch, or even for meetings.

Another recommendation is to create an organizational strategy to remind employees to get up and move every hour (CDC, 2013b). Finally, the use of technology can help to promote physical activity. I recommend providing a low cost pedometer to employees to track steps; more high tech activity monitors could also be purchased and provided as prizes to challenge winners (Arena et al., 2013). Promoting healthy eating is a fundamental component of wellness and disease prevention (Ganter, 2012). Individuals do not get the recommended dietary intake of fruit and vegetables daily (Arena et al., 2013). Changes to cafeteria and vending options should be healthy, and nutritious, yet delicious enough to be appealing. Vending machine options should also be evaluated for nutritional content and those less healthy options removed from vending machines.

Meetings with catered meals should include nutritious food. The nutritional content of all food should be posted. I also recommend offering cooking and shopping classes to employees; many employees have discussed this need with the employee health nurse (employee health nurse, personal communication, October 30, 2014).

Other key benefits recommended to the hospital to promote health and wellness include continuing the employee assistance program (EAP), occupational health services, onsite clinics, and absenteeism management (Mattke et al., 2013). The hospital currently has an EAP program, which is not widely utilized. I recommend making the program more available to employees, as well as providing some additional education to employees regarding available EAP services. It is recommended that onsite medical care be made easily available to employees for scheduled visits or walk in appointments. Employees can see practitioners for sick visits, well visits, or receive counseling or wellness follow up. It is recommended to offer variable times in order to capture employees on all shifts. Occupational health services can help reduce employee injury while on the job (Mattke et al., 2013).

While the organization currently does a good job of tracking injuries, it may be of benefit to track and trend them for opportunities to improve the safety of the workplace. Another creative initiative is to begin tracking absenteeism within the organization, including rates and reason for missing work. If an opportunity for improvement exists, then the organization could look into developing a program to mitigate absenteeism rates (Mattke et al., 2013). One of the least discussed strategies is to adopt organizational policies and procedures to promote a healthy workplace for all employees. While the

hospital does have some of these services in place, I believe there is an opportunity to enhance services.

Over the next year, all policies and procedures should be reviewed to make sure they are promoting a healthy work environment for the employee. Another consideration for leadership is to determine the feasibility of providing childcare and elder services to employees while working. This may help alleviate stress for employees, improve participation in Health Matters, provide a healthy work environment, and establish a sense of caring among employees. Having a healthy physical environment can help promote wellness activities among employees (Arena et al., 2013). Going forward, the healthy physical environment concept should be incorporated into all policies, procedures, and practices.

Approximately 84% of organizations with wellness programs use incentives, or positive reinforcement to promote participation (Mattke et al., 2013). Programs that offer incentives tend to have higher rates of participation (Arena et al., 2013; Robroek et al., 2009). Incentives can improve the engagement of employees within the program, thus improving participation levels and overall health of the organization, as well as change behavior (Justice, 2013; Robroek et al., 2009). Incentives may also be offered for HRA and biometric completion; the median incentive to encourage completion is \$300 for a full time employee (Mattke et al., 2013).

I recommend continuing to offer incentives for program participation and goal achievement. In addition, I recommend that the hospital also offer incentives during the various wellness challenges throughout the year. These incentives should be congruent

with the culture of the organization, which includes the employees. Meaning incentives must be those that appeal to the employees. For example, during one month there could be a focus on achieving at least 10,000 steps a day and employees can track their steps over time and report them to the wellness nurse. The employee with the most steps earns an incentive. Again, confidentiality should be maintained so that the employee who wins does not have personal health information divulged (Justice, 2013).

Generally, financial incentives tend to be the most popular among participants (Haynes & Helms, 2001). Incentive use should be in line with legal requirements and can include monetary benefits, premium reductions, gift cards, massages, free fitness equipment, gym membership, or novelties (Mattke et al., 2013). Wellness contests and incentives must be planned for the year. It is suggested by the researcher that there is a specific activity planned monthly in order to increase and sustain participation. Keeping employees engaged in the program is a critical element in having a successful wellness program. I recommend providing monthly challenges, or programs to the employees to increase their participation. Another way to promote the challenges and programs is to offer small rewards and incentives for participation, or for winning. These programs should be structured around the employee needs and preferences.

A successful program will only be as successful as the employees who use the program (Justice, 2013). Leadership support is critical, as well as the establishment of a wellness champion. It is also recommended that the organization revitalize the wellness team. This team should include a diverse representation of employees from all areas of the organization. This team can offer direct input to the program through the employee

perspective and assist with wellness program activities. This input may help to improve participation by gaining knowledge on program needs, thus improving participation. It is suggested that the wellness coordinator and employee wellness nurse chair the committee. Because the hospital is open 24/7 and employees are spread among several buildings, it is recommended that the organization have many different touch points for access to the program (Justice, 2013). This includes services that are available during various hours and materials that are available in a variety of different methods based on the employee's learning preference (Justice, 2013).

The services need to be available on demand to the employee in order to facilitate use and overall engagement and long-term sustainability. Programs must be available to the employee regardless of the shift they are working. Arena et al. (2013) found that time is the most valuable resource to employees, thus a flexible approach is needed to preserve the employees time while still promoting participation. This strategy provides a consistent opportunity for employees to engage in the program (Mattke et al., 2013).

I recommend that programs be conducted on site whenever possible in order to improve attendance. The hospital should consider offerings during employee work time. For example, offering an exercise class on campus during lunch or between shifts to encourage participation. Lunch and learn educational programs can be offered during lunch times to accommodate employees during their workday. This strategy may help to engage some employees that may otherwise not participate because of other responsibilities after work including a second job, children, family responsibilities, or pets as was noted in this survey by a statistically significant difference between

participants and nonparticipants in terms of responsibility for children/elders, age, and shift worked.

Payment status was also a significant predictor of participation in the wellness program, with most salaried employees work day shift. This would suggest the need to design similar programs for those working other shifts. This would support the need for activities during work hours in order to improve participation rates. By offering programs while at work, the employee not only feels valued, but also shows that leadership is committed to the health and wellness of the employees.

I also recommend incorporating wellness education into all facets of the program. This includes multiple modalities such as handouts, videos, lunch and learn educational programs, one-to-one interaction, group classes, and online education. These classes and materials need to be updated frequently with current information and topics need to change depending upon the needs of the employees. Another highly recommended intervention is to develop an employee interactive portal where employees can track their own progress towards goals (Ganter, 2012; Justice, 2013). If one is not an option, then perhaps the employee wellness nurse can work with employees to show them some of the applications available through smart phones for tracking caloric intake and daily exercise. These interventions may help to educate some of the employees with less healthy lifestyles, thus improving their behaviors related to health and wellness and improving participation in the program, Health Matters.

Stress does appear to be a concern among some of those who completed the survey instrument. Currently there are no programs offered to the employees related to

stress reduction or stress management. Programs should be developed and implemented to help employees deal with stress and may include cognitive behavior therapy, relaxation techniques, and individual counseling (Arena et al., 2013). Stress is not always caused by work related issues; home concerns may also cause employees to have high levels of stress. There needs to be further assessment of the cause of stress among employees and then specific programs developed to address those needs. For example, in the past, employees have asked that leadership provide a money management class. It is important that the hospital not only promote workplace wellness, but also wellness in the employee's home. The organization can either develop stress reduction programs for employees, or work with local community agencies to provide the service to the employees. These services should be reflective of the Anabaptist cultural needs through collaboration with local community agencies that understand the culture, or faith based organizations in the community. Exercise can help decrease stress levels. One example, as discussed by Mattke et al., (2013) is to place exercise equipment in strategic locations for employees to use during break time or down time. This not only promotes exercise and reduces stress, but also makes the activity convenient for the employee (Arena et al., 2013).

I also recommend collaborating with the local bariatric physician and a naturopathic doctor to provide select services or programs to employees. These programs can be specific to the individual need. The hospital can work with the provider to obtain a reduced rate for the employee (subsidy paid by hospital), or can reimburse the employee after the completion of the program. This is another request of several hospital employees

(employee health nurse, personal communication, October 30, 2014). Another option would be to see if it is possible to work with Weight Watchers to provide a discount to employees, as well as a place for meal delivery.

The wellness concept, employer commitment, and wellness strategies must be clearly communicated to staff at every available opportunity. This includes messages at the CEO forum, in newsletters, emails, posters, on bulletin boards, during staff meetings, and via other communication methods. I believe it would be beneficial to start with the why to employees. Communication methods need to be updated to reflect the current message. I also believe it is important to communicate goals and progress towards goals as an organization. Individuals may also be willing to share their own success story with others.

### **Evaluation**

Program evaluation is another important element of establishing a wellness program. Three components of evaluation include employee input, goal attainment with respect to outcomes, and demonstration of Health Matter's ROI. Ongoing employee input is fundamental to the employee wellness program. Employees must have a method for communicating needs and preferences so that programs can be planned appropriately. Churchill et al. (2014) cautioned organizations to remember that employee preferences are constantly changing; thus current preferences may not hold true for the future. It is important to assess employee preferences, as well as critically analyze and assess the workforce health needs based on HRA and biometric findings (Churchill et al., 2014). I recommend that the wellness coordinator and employee wellness nurse develop an annual

needs assessment that can be completed anonymously by employees using Survey Monkey software. These data can be analyzed and used to plan the next year's program. Annually, the program outcomes and ROI must be analyzed to determine if the program is meeting goal. This is why it is important to have a way to track and trend results each year.

Because wellness programs are in an early development stage, the researcher recommends the organization have a legal review of the proposed program to assure compliance with all legal and regulatory requirements. Incentives must also be in line with regulatory requirements. I recommend the hospital have an outside legal review of the program annually.

### **Future Research**

This study opens the door for future research, not only in the current organization, but also in other small hospitals wishing to implement a comprehensive wellness program. Health and wellness are at a critical juncture in society. There will continue to be an interest in learning more about employee participation and nonparticipation. The next phase of research might include an analysis of employee health outcomes over time between participants and nonparticipants. Research could include a comparison of participants' and nonparticipants' health outcomes, educational awareness, risk modification, healthcare costs, and work productivity. In addition, research should be conducted to evaluate the cognitive and perceptual factors relate to the Pender Model using instruments that are more reliable. Future researchers could also look at specific

interventions to determine efficacy, or various methods to determine which are more effective at achieving participation and outcomes.

### **Social Change**

Positive social change is defined as the application of ideas, strategies, and actions to promote the overall worth, dignity, and development of individuals within their community, society, organization, and culture to improve both social conditions and humankind (Walden, 2012, p. 4). The research from this study, as well as subsequent best practices outlined in the literature affords us many opportunities to positively affect social change. Health and wellness are critical issues facing society. Many members of society spend a great portion of their time at work, which makes workplace wellness programs an optimal solution to helping employees maintain their health, become healthier, or mitigate risk factors. The successful implementation and engagement of staff in an employer sponsored wellness plan can lead to improved health. A wellness program will help to create a positive social change through promotion of healthy lifestyles and wellness activities, which improve workplace communities subsequently leading to healthier communities. Employers must now be more concerned with the true cost of an unwell workforce. Current research is lacking on wellness programs in rural hospitals.

### **Strengths and Limitations**

This section is a description of the strengths and limitations of the research project with recommendations to help mitigate limitations. In terms of strengths, the number of employees participating in the study was very good (64%). Findings of this study are also consistent with findings in the literature. Some of the findings from this study were

similar to those found in others. The data analysis yielded important information, which I used to make revisions to the organization's current wellness program. This information was specific to the organization. These recommendations were reported to senior leadership.

One limitation of this study was the low Chronbach's Alpha values obtained on the scales used to measure overall health, health locus of control, and self-motivation inventory. Chronbach's alpha measures the degree to which the same fundamental elements, or constructs, are being measured among the different instrument components (Polit & Beck, 2012). Initial research on the health locus of control scale found a Chronbach's alpha reliability of 0.72 (Wallston, Wallston, Kaplan, & Maides, 1976 as cited by Hallion & Haignere, 1998; M.E. Hallion, personal communication, January 24, 2014). Acceptable concurrent validity and discriminant validity was determined by Wallston et al. The self-motivation inventory reliability was measured twice, the first time by Steinhart and the second by Wilson with Chronbach's alpha reliability of 0.88 and 0.86 respectively (Wilson, 1986, as cited by Hallion & Haignere, 1998). Dishman and Ickes (1981) determined both predictive and discriminate validity for the instrument. During the planning phase of the research study, I verified with the researchers of the replicated study that the findings based on their questionnaire had reached acceptable reliability levels. (M.E. Hallion, personal communication, October 1, 2013). Based on these findings, I moved forward with the replication study using the Hallion and Haignere questionnaire. The Cronbach's alpha values were not reported in their published article (Hallion & Haignere, 1998).

Table 12 displays Chronbach's alphas of scales on overall health perceptions, health locus of control, and on the self-motivation inventory for the hospital's survey participants using the Hallion and Haignere (1998) questionnaire. Instrument reliability, indicated by the Chronbach's alpha, on all three scales did not reach acceptable levels. A reliability coefficient of at least 0.70 or higher indicates a higher degree of internal consistency, or higher levels of reliability (Polit & Beck, 2010; Scholtes, Terwee, & Poolman, 2010). A more extensive literature review of the Health Locus of Control Scale found that while the original Chronbach's alpha was .72, subsequent calculations revealed alpha vales between .30-.59 respectively, which is much lower than originally reported (Lefcourt, 1981). When analysis revealed inadequate Chronbach's alpha values, I contacted Hallion again to discuss prior alpha values. I learned at that time that the researchers of the replicated study did not perform Chronbach's alpha testing on their sample (M.E. Hallion, personal communication, November 17, 2014).

Table 12

*Survey Mean, Standard Deviation, Observed Range, and Chronbach's Alpha*

Variable	<i>n</i>	Mean	<i>SD</i>	Observed range	Chronbach's alpha
Overall Health	177	15.3	2.10	9-20	.42
Health Locus of Control	170	34.9	5.34	19-56	.48
Self-Motivation	162	53.0	5.68	37-71	.31

Various factors affect the reliability of an instrument. Instrument reliability is dynamic and reliability scores may change based on the sample in which the instrument is administered (Polit & Beck, 2012). One such factor is the heterogeneity of the sample; the more homogenous the participants, the lower the Chronbach's alpha score (Polit &

Beck, 2012; Streiner, 2003). Instruments are intended to measure differences among survey participants and the more homogenous the survey participants, the more difficult it is for the instrument to detect differences in the sample (Polit & Beck, 2012). Streiner (2003) concluded that the alpha value cannot be generalized to all situations because if the group in which the scale is being used is more homogenous than the original group, the alpha value will be different, most likely lower than the first group's alpha value.

In reviewing the hospital's demographics and survey participants, homogeneity is evident, in that the overwhelming majority are Caucasian females, either married or living with their partner, and many were raised in the community in which they work. A large number of employees in this hospital were raised in the community or currently live in the community (Employee Health Nurse, personal communication, October 30, 2014). These characteristics, along with the strong Anabaptist culture, may contribute to the low alpha values signifying little difference in responses among participants because of the similar cultural background of the participants. This hospital's employees may be more homogenous than the populations in the study where the Health Locus of Control and the Self-Motivation Inventory were developed.

Because of the low Chronbach's alpha values in this study, the survey results cannot be generalized to other populations; however, there are still important findings that can be used to help develop the hospital's wellness program. In the future, I would use instruments that could garner a more adequate reliability score. Organizational cultures differ thus leading to different attitudes among organizations with respect to wellness programs (Churchill et al., 2014; Ganter, 2012; Schmidt, 2012; Taylor &

Bithoney, 2012). This study took place at a small rural hospital and it may be difficult to generalize findings to large hospitals.

### **Analysis of Self**

This section is a description of the growth and analysis of myself as a scholar, practitioner, and project lead. The DNP emphasizes the practice of nursing and the integration of research into practice. This DNP project has helped to strengthen my utilization and understanding of the American Association of Colleges of Nurses (AACN) DNP Essentials, which are critical to practice for the DNP. Nurses are an important component of the healthcare system and this is not expected to change anytime soon. Nurses must not only practice at the highest level possible, but also use transformational leadership skills to lead others to embrace the translation of evidence into practice to better both the profession of nursing and patient outcomes.

### **Scholar**

Scholarship is a fundamental component of our practice. According to the ANCC, scholarship is defined as activities that advance the teaching, practice, and research through inquiry that is significant to the profession, is creative, is documented, can be replicated, and can be peer reviewed through a multitude of methods (ANCC, 1999), specifically, the discovery, teaching application, and integration of knowledge throughout our practice (ANCC, 1999).

As a scholar, researching the literature, assisting the organization in selecting a tool to evaluate their employees' perceptions of their wellness program, and disseminating the findings, as well as current evidence has been extremely beneficial.

Many of the best practices noted in the literature review were recommended to the organization in which the research was conducted. In addition, the results of the survey were with the leadership team and employee health nurse. The scientific underpinnings for our practice have expanded over the years to now include not only the natural sciences, but also the social sciences, which serves as a foundation for our practice (ANCC, 2006). It is critical to not only discover new knowledge, but to translate the new information into practice (ANCC, 2006).

This DNP project has involved both the translation of evidence into practice and the subsequent dissemination and integration of knowledge (ANCC, 2006). In order to optimize patient care and nursing practice, the DNP must translate evidence into practice using transformational leadership skills, guidance, change management skills, and practice evaluation methods. The project has also afforded me the opportunity to participate in evidence-based scholarship.

As a scholar, I have applied research to solve a problem, specifically the translation of research into practice and the dissemination and integration of new knowledge (Terry, 2012). Scholarship also includes evaluating practice, improving outcomes and sustainability, and participating in collaborative research (Terry, 2012). I had the opportunity to apply a wide variety of concepts, methods, models, best practices, and theory into practice. Working through this process has allowed me to refine my research capabilities, as well as my ability to synthesize information to develop a plan that meets the needs of the organization. Through this process, I have had to evaluate changes and work with key stakeholders to implement changes within the organization.

**Practitioner**

In terms of practitioner, the project has allowed me the ability to have a mentored practical learning experience while also addressing issues central to nursing practice through the use of systematic inquiry. Guidance from my mentor and program chair has helped to provide an enriched positive learning experience. Leaders consistently look for opportunities to improve a process based on current evidence based practice. This experience has helped to solidify that for me as I look for creative ways to improve the organization's wellness program based not only on the literature and best practices, but employee preferences.

I have also discovered through this project the importance of a healthy workplace environment and the responsibilities that leaders have to cultivate healthy workplaces. Successful companies and leaders have concern for employees on the job, but also at home. The research has solidified the importance of such initiatives and the positive return on investment that can occur, such as a more engaged workforce, or decreased absenteeism. I believe providing and promoting health lifestyles and work environments can provide the organization not only with a more synergized collaborative engaged team, but also provide a competitive advantage for the organization. As a nurse concerned for patient outcomes and quality of care, this type of environment will allow our patients to flourish as they receive high quality patient care.

**Professional**

In addition to being a scholarly practitioner, nurses must also possess a level of professionalism within their practice. The growth and development in professionalism is

a fluid process and nurses continually grow and develop professionally through their work, scholarship, leadership, education, and experiences. For me, this project has helped me to further develop professional behaviors and attributes that will continue to help me grow in the DNP role. Nurses must seek to always uphold professional practice standards, as well as individual values and those of the profession. Professionalism includes upholding the American Nurses Association Standards of Practice, as well as Standards of Professional Performance. In terms of professional, this experience has helped me to refine my leadership skills, particularly presenting information, communicating, change management, and leading and managing teams. It also encompasses such characteristics as honesty and ethical behavior.

### **Project Developer**

As a project lead, I have been involved in every aspect of the organization's wellness program, including the development and planning of the program, and I am now viewed as a credible resource for the organization. This project has helped to develop not only my skills as a future DNP, but also my leadership skills and project management skills, particularly handling multiple competing priorities. This project has helped me to further develop and refine my change management and communication skills.

### **Conclusion**

While reflecting on my experiences and journey, I have grown both personally and professionally over the past several years because of my DNP program. The experience has been rewarding and rich and afforded me with many opportunities for growth and learning both in the classroom setting and clinical practicum setting. These

experts have encouraged my personal growth and development while also mentoring, coaching, and sharing knowledge with me through my journey. These experiences have been meaningful and contributed to my overall knowledge base and provided me with the foundations for my DNP. My DNP education, including the research project, has prepared to function as a new graduate DNP. The DNP assumes many roles in practice such as scholar, leader, educator, practitioner, and project leader. This experience has provided me with experience and growth in each of the DNP essentials competencies. These competencies serve as the foundation for my practice.

## Section 5: Scholarly Product

The purpose of this study was to determine how employees participating in a rural hospital's wellness program, Health Matters, differed from nonparticipants in demographics, personal health perceptions, general health behaviors, health locus of control, self-motivation, and situational barriers. One of the fundamental essentials of scholarship is the disseminating information and integration of knowledge into our practice (ANCC, 2006). The research garnered from this project will afford many different methodologies for future dissemination and research.

For purposes of this project, the researcher disseminated the recommendations to the hospital's leadership team and employee health nurse using a PowerPoint presentation. The presentation included all the components of the DNP project, including the recommendations to change the organization's wellness model and subsequent best practice wellness program components. The recommendations outlined in the proposal will help to provide an evidence based practice approach, while also taking into account the unique characteristics of the organization, as well as subsequent research findings. There is momentum and support for the proposed changes to the model in the organization. There is also discussion about future research studies involving the hospital wellness program.

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### Appendix A: Letter of Invitation to Participate

Dear Fellow Hospital Employee,

In line with our mission of “Caring for Our Community’s Health” we see the health of you, our employees, as a vital component to the success of our community hospital. If we are to provide a healthy environment to support your personal individual health and wellness goals, it is important that we understand your beliefs and practices related to health and wellness programs.

We invite you to take part in this survey to help us learn why some employees participate in and some do not participate in the hospital’s employee wellness program. The survey is 60 questions and will take you approximately 15 minutes to complete on Survey Monkey. The survey is completely anonymous. You will not write your name anywhere on the survey. You will benefit from participation by knowing that completion of the survey will provide valuable information to help the future development of the hospital’s wellness program. You will also be eligible to receive a \$50.00 gas card. If 50% or more of the hospital’s employees complete the survey an incentive will be offered in the form of a \$50.00 gas card. All employees employed at the time of the survey will be eligible for the drawing. Ten random names will be drawn by the Employee Health Nurse, each receiving a \$50.00 gas card.

If you have questions, please contact Monica at extension 1756.

## Appendix B: Letter of Permission to Use the Hallion and Haignere Survey Instrument

Walden University Mail - Use of Wallston 11 item locus of control Likert scale

Page 1 of 1

**Appendix C**

Nicole Kolacz &lt;nicole.kolacz@waldenu.edu&gt;

**Use of Wallston 11 item locus of control Likert scale**

Wallston, Ken <ken.wallston@vanderbilt.edu>  
 To: Nicole Kolacz <nicole.kolacz@waldenu.edu>

Thu, Apr 3, 2014 at 10:12 PM

Nicole,

The health locus of control scale are in the public domain. That means you do not need my or any one else's permission to use them in your research. That's actually good for you, since I withdrew my support for using the 11-item HLC scale back in 1978 when we published the Multidimensional Health Locus of Control scales.

You may submit this note to your IRB, and hopefully they will accept it. If not, direct them to this site for further information: <http://www.nursing.vanderbilt.edu/faculty/kwallston/mhlcscscales.htm>

Best wishes with you DNP project,

Ken Wallston, PhD  
 Professor of Psychology in Nursing  
 Vanderbilt University

From: Nicole Kolacz [[nicole.kolacz@waldenu.edu](mailto:nicole.kolacz@waldenu.edu)]  
 Sent: Thursday, April 03, 2014 3:36 PM  
 To: Wallston, Ken  
 Subject: Use of Wallston 11 item locus of control Likert scale  
 [Quoted text hidden]  
 330-473-390<tel:330-473-3905>



## *Multidimensional Health Locus of Control (MHLC) Scales*

***Greetings Fellow Health Researchers  
From Kenneth A. Wallston, PhD***

Thank you for inquiring about our MHLC scales. All three forms and the scoring instructions of the MHLC are available just by clicking the "hot links" and printing out a particular form. Also, please be sure to read the FAQs pages that contain answers to many Frequently Asked Questions about how to use the scales in research studies.

- [Form A](#)
- [Form B](#)
- [Form C](#)
- [Scoring Instructions for all Forms](#)
- [Selected Bibliography](#)
- [FAQ](#)

Forms A & B are the "general" health locus of control scales that have been in use since the mid-late 1970's (and were first described in Wallston, Wallston, & DeVellis, 1978, *Health Education Monographs*, 6, 160-170.) Each of these two "equivalent" forms contain three 6 item subscales: internality; powerful others externality; and chance externality. In the past 30 years, forms A/B have been used in over a thousand studies and have been cited in the literature hundreds of times.

Form C is designed to be "condition-specific" and can be used in place of Form A/B when studying people with an existing health/medical condition. [The way you make this happen is to replace the word "condition" in each item with whatever condition (e.g., arthritis, diabetes, pain, etc.) your subjects have.] Like Forms A/B, Form C also has 18 items, but, instead of a single 6 item powerful others subscale, Form C has two, independent 3 item subscales: doctors, and other people. Form C is described in Wallston, Stein, & Smith, 1994, *Journal of Personality Assessment*, 63, 534-553.

We consider all three forms of the MHLC to be "in the public domain." That means that you are free to use the scales in your research (and to alter them for your research in any way you choose) without obtaining our explicit permission. We do ask, however, that you cite the scales correctly if/when you use them. If you are a student, you have our permission to include a copy of scale(s) in the appendix to your thesis or dissertation; otherwise, it would be unethical to publish these scales without obtaining our explicit written permission to do so.

For those who are studying the relationship between religious beliefs and health, we have also developed the God Locus of Health Control (GLHC) scale. The GLHC contains 6 items and can be used alone or in conjunction with one of the forms of the MHLC. There are two versions of the GLHC: one assess the belief that God control's one's health in general; the other assesses the belief that God controls changes in one's medical condition. Click [here](#) for a copy of the GLHC items.

For more information, click [here](#) to send an e-mail message or mail a request to:

Ken Wallston, PhD  
[Vanderbilt University School of Nursing](#)  
Godchaux Hall  
21st Avenue South  
Nashville, TN 37240

*Last modified on 6/15/07  
by [Kandace Harmon](#)*



Nicole Kolacz <nicole.kolacz@waldenu.edu>

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## Self motivation inventory tool

---

Nicole Kolacz <nicole.kolacz@waldenu.edu>  
To: rdishman@uga.edu

Thu, Apr 3, 2014 at 9:11 PM

Hello, I am a DNP student working on a project on centered on employee wellness programs. I found a survey tool that I would like to use in my study that Dr Hallion and Dr Haignere used for their study. Dr Hallion has given me permission to use her tool; however, I would like permission from you to use your 20 item version of the self motivation inventory tool that was used in their study.

I would like permission to use the tool and then to reproduce the instrument in my dissertation. I will need to submit a copy of this email with my IRB application. Would you please respond back and allow me the permission to use the survey and reproduce within my dissertation?

Thank you so much,

Nicole Kolacz  
330-473-390



Nicole Kolacz <nicole.kolacz@waldenu.edu>

---

## Self motivation inventory tool

---

Rodney K Dishman <rdishman@uga.edu>  
To: Nicole Kolacz <nicole.kolacz@waldenu.edu>

Fri, Apr 4, 2014 at 6:59 AM

Permission granted, Nicole

I've attached the copyrighted 40-item scale and the 10-item short form for reproduction in your dissertation. There is no 20-item version.

Good luck

---

**From:** Nicole Kolacz <nicole.kolacz@waldenu.edu>  
**Sent:** Thursday, April 03, 2014 9:11 PM  
**To:** Rodney K Dishman  
**Subject:** Self motivation inventory tool

[Quoted text hidden]

---

### 2 attachments

 **SMIQuestionnaire.pdf**  
42K

 **SMI-10 questionnaire.pdf**  
11K



Nicole Kolacz <nicole.kolacz@waldenu.edu>

---

## Survey Instrument

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Hallion, Maria Elena <mehallion@cabrini.edu>  
To: Nicole Kolacz <nicole.kolacz@waldenu.edu>

Thu, Apr 3, 2014 at 4:03 PM

Please accept this email as official approval for use of my instrument that I created. The two parts of the instrument, motivation and self locus of control are not mine.

Dr. Hallion

Sent from my iPad  
[Quoted text hidden]

From: Stern, Janice, Springer US <[Janice.Stern@springer.com](mailto:Janice.Stern@springer.com)>  
Date: Monday, April 6, 2015  
Subject: permission to use model  
To: Nicole Kolacz <[nicole.kolacz@waldenu.edu](mailto:nicole.kolacz@waldenu.edu)>

Dear Ms Kolacz,

Permission is granted, provided you include the following or similar credit line: **Modified from Hong et al., Predictors of hearing protection behavior among firefighters in the United States, Int J Behav Med 20:121-130 (2013), with permission.**

Feel free to modify the credit line to agree with your project's style specifications but please do include the above information.

Best wishes,

Janice Stern

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## Appendix C: Survey

Please answer each question to the best of your ability by marking the appropriate response on the questionnaire. All responses are confidential. Please do not put your name or any other identifiable mark on this questionnaire.

**I. The following questions pertain to your health and health practices. Please answer each question as accurately and honestly as possible.**

1. Compared to other people your age would you say your health is:
  - Excellent
  - Good
  - Fair
  - Poor
  
2. In the past six months, has your health:
  - Improved
  - Stayed the same
  - Gotten worse
  
3. In the past month, how often did you exercise each week? (exercise is activity lasting at least 20 minutes, such as walking, jogging, swimming, bicycling)
  - 3 times a week or more
  - 1-2 times per week
  - Less than once a week
  - Did not exercise
  
4. Check the ONE phrase below that best describes how often you experience stress.
  - Occasional stress
  - Frequent stress
  - Constant stress
  
5. Check the ONE phrase below that best describes your diet over the last six months.
  - Low dietary fat intake
  - Average dietary fat intake
  - High dietary fat intake
  
6. Do you smoke cigarettes at all?
  - No
  - Yes
  
7. How would you classify yourself according to your current weight?
  - Underweight

- Slightly overweight
- Very overweight

II. Indicate the level to which you agree or disagree with the statements below.	Strongly disagree	Somewhat disagree	Disagree	Agree	Somewhat agree	Strongly agree
8. If I take care of myself, I can avoid illness.						
9. Whenever I get sick it is because of something I've done or not done.						
10. Good health is largely a matter of good fortune.						
11. No matter what I do, if I am going to get sick I will get sick.						
12. Most people do not realize the extent to which their illnesses are controlled by accidental happenings.						
13. I can only do what my doctor tells me to do.						
14. There are so many strange diseases around that you never know how or when you might pick one up.						
15. When I feel ill, I know it is because I have not been getting the proper exercise or eating right.						
16. People who never get sick are just plain lucky.						
17. People's ill health results from their own carelessness.						
18. I am directly responsible for my health.						

<b>III. For each of the following statements, indicate how closely the statement fits you and what you do.</b>	<b>Very uncharacteristic of me</b>	<b>Somewhat uncharacteristic of me</b>	<b>Not sure</b>	<b>Somewhat characteristic of me</b>	<b>Very characteristic of me</b>
19. I can persevere at stressful tasks, even when they are physically tiring or painful.					
20. If something gets to be too much of an effort to do, I'm likely to just forget it.					
21. I'm really concerned about developing and maintaining self-discipline.					
22. I don't work any harder than I have to.					
23. I seldom work to my full capacity.					
24. I'm just not the goal-setting type.					
25. I'm willing to work for the things I want as long as it's not a big hassle for me.					
26. I have a lot of self-motivation.					
27. I get discouraged easily.					
28. I don't like to over extend myself.					
29. I tend to lack feeling or emotion.					
30. I like to take on jobs that challenge me.					
31. I change my mind about things quite easily.					
32. I have a lot of will power.					
33. Things just don't matter much to me.					
34. I avoid stressful situations.					
35. I never force myself to do things I don't feel like doing.					
36. It takes a lot to get me going.					
37. Whenever I reach a goal, I set a higher one.					
38. I can persist in spite of failure.					

**IV. The following questions pertain to several situations not directly related to your employment at the hospital. Please answer as accurately as possible.**

39. Check the phrase that best describes how you travel home from work the majority (3 or more days a week) of the time:
- Drive home alone
  - Walk
  - Drive home with another employee(s)
  - Bus, train, or other transit
  - Picked up by someone not employed here
  - Other \_\_\_\_\_

40. How long does it take you to travel home from work on a typical day? Check the most accurate response.
- 1 to 15 minutes
  - 16 to 25 minutes
  - 26 to 35 minutes
  - 36 to 45 minutes
  - 46 minutes or more
41. Do you have children or dependent elders at home?
- No (if no, skip to question #43)
  - Yes
42. How would you describe the percentage of responsibility you have for child or elder care after work (choose only one)?
- a. 100% someone else
  - b. 75% someone else, 25% mine
  - c. 50% someone else, 50% mine
  - d. 25% someone else, 75% mine
  - e. 100% mine
43. Do you have more than one job?
- a. No
  - b. Yes
44. Other than those asked above, do you have any other factors that require you to leave the hospital immediately after your shift is over?
- a. No
  - b. Yes If yes, please describe
- 

**V. The following questions pertain to your access and use of health and wellness services and programs. Please answer as accurately as possible.**

45. Did you have access to any other health and wellness programs or services other than those offered through the Employee Wellness Program at the hospital?
- a. No (If no, go to question # 46)
  - b. Yes
46. Did you utilize any other health and wellness programs or services other than those offered through the Employee Wellness Program at the hospital?
- a. No
  - b. Yes

47. Please check the type of Employee Wellness services or programs you attended or participated in at the hospital during the last six months (check ALL that apply).
- a. Free health screenings (for example: blood pressure, cholesterol)
  - b. Free monthly education workshops (for example: nutrition, heart health)
  - c. Multi-session program (for example: weight or stress management)
  - d. Personal counseling session (exercise or nutrition)
48. What are the reasons you did not attend any Employee Wellness Program offered at the hospital during the last six months (check ALL that apply).
- a. Did not know about them
  - b. Not interested
  - c. No one I knew was going
  - d. Too busy
  - e. Times not convenient
  - f. Other
- 
- 

**VI. Please complete the following information by filling in the blank or placing a check next to the correct response.**

49. What is your current age?
- a. 18-29 years
  - b. 30-39 years
  - c. 40-49 years
  - d. 50-59 years
  - e. >60 years
50. What is your sex?
- a. Female
  - b. Male
51. What is your race?
- a. African American
  - b. Hispanic
  - c. Asian
  - d. Pacific Islander
  - e. Caucasian / white
  - f. Native American
  - g. Other \_\_\_\_\_
52. What is your marital status?
- a. Married / living with mate

- b. Widowed
  - c. Separated/Divorced
  - d. Single / never married
53. How far did you go in school?
- a. Less than 9<sup>th</sup> grade
  - b. Some high school
  - c. High school graduate
  - d. Some college or technical training
  - e. College graduate
  - f. Post graduate
54. What is your employment status at the hospital?
- a. Full-time employee
  - b. Part-time employee
  - c. Per diem employee
  - d. Consultant
55. Is your payment status hourly or salary?
- a. Salary
  - b. Hourly
56. How long have you been employed at the hospital to date?
- a. 0-10 years
  - b. 11-20 years
  - c. 21-30 years
  - d. 31-40 years
  - e. > 40 years
57. How many hours per day do you most often work?
- a. 8 hours
  - b. 10 hours
  - c. 12 hours
  - d. > 12 hours
58. Which type of shift do you most often work?
- a. Day
  - b. Afternoon
  - c. Night
59. What type of health insurance plan are you currently enrolled in?
- a. AultCare
  - b. Cigna

- c. Medical Mutual
- d. Aetna
- e. Prime Time Health
- f. Humana
- g. Blue Shield
- h. None
- i. Other \_\_\_\_\_

60. Please check the number that best represents your total household income (including your income and the income of anyone else who contributes to the upkeep of the house).
- a. \$10,000 - \$39,000
  - b. \$40,000 - \$59,999
  - c. \$60,000 - \$79,999
  - d. \$80,000 - \$99,999
  - e. >\$100,000

Are there any wellness programs you would be interested in?

Any other considerations you would like to communicate about employee wellness at this time?

Thank you for your time and cooperation.