An Evaluation of Worksite Wellness Program Components within the Corporate and Academic Settings

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ABSTRACT
AN EVALUATION OF WORKSITE WELLNESS PROGRAM COMPONENTS WITHIN THE CORPORATE AND ACADEMIC SETTINGS

By
JALISA MICHELLE JONES
DECEMBER 16, 2015

INTRODUCTION: As healthcare within the United States continues to evolve, novel and innovative programs are needed to address the top three leading causes of death, which are largely lifestyle and behavioral related: heart disease, cancer, and stroke. About fifty percent of U.S. adults have at least one chronic disease. Entities such as the government, employers, and employees are responsible for paying for America’s healthcare bill. Sixty percent of U.S. healthcare expenditures are paid by employers. A current solution to reducing healthcare costs and the prevalence of chronic disease are worksite wellness programs, which increasingly are being adopted by employers. Most worksite wellness programs have provided an environment for individuals to achieve physical dimension of wellness goals through emphasis on exercise and fitness. However, there is increased recognition that worksite wellness programs need multiple components to engage all dimensions of wellness, not just physical. As a result, there are a variety of wellness frameworks that include five, six, seven, eight or twelve dimensions of wellness. Worksite wellness programs should offer services that attempt to impact all of the dimensions of wellness. Since an individual’s workplace is a breeding ground for risk behaviors that cause diabetes and cardiovascular disease such as elevated stress levels, unhealthy eating and drinking behaviors, and lack of physical activity.

AIM: The purpose of this study is to conduct secondary analysis to assess worksite wellness program components and best practices as defined by program managers within the corporate and university settings.

METHODS: A content analysis was undertaken to identify common themes from case studies of nine university wellness programs and interview transcripts from the perspective of eleven wellness program managers employed in corporate and university settings.

RESULTS: The study findings suggest that programs within the university setting target multiple population demographics and seek to improve more than the physical dimension of wellness.

DISCUSSION: As mentioned by the program managers and previous literature, communication, consistency, and program components that address multi-dimensions are found to be the best practices of worksite wellness programs. To engage program participants, it is suggested that program managers should seek to expand their programs, collaborate, communicate, and be consistent with programming and communication. To confirm these findings, studies that use a larger sample of universities and corporations are needed to further assess program components and employee participation.
AN EVALUATION OF WORKSITE WELLNESS PROGRAM COMPONENTS WITHIN THE CORPORATE AND ACADEMIC SETTINGS

by

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B.A., SPELMAN COLLEGE

A Thesis Submitted to the Graduate Faculty of Georgia State University in Partial Fulfillment of the Requirements for the Degree

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WITHIN THE CORPORATE AND ACADEMIC SETTINGS

by

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This journey has not been easy, but I am thankful for God, my family, friends, and mentors for cheering and pushing me through this process. The topic of wellness is very near and dear to my heart. My grandfather, who passed away 15 years ago, died too soon at the young age of 63. I constantly wonder if he was well in every aspect of his life: spiritually, physically, emotionally, occupationally, and socially. I personally believe worksites are a unique setting to address lifestyle and behavioral related diseases.

Lastly, I would specifically like to thank Dr. Shanta Dube for providing me an arena for researching wellness and well-being. I thank you for your patience, guidance, and encouragement.
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INTRODUCTION

The shift of health and disease patterns has evolved the way we practice and promote health. In the 1900s, individuals lived in overcrowded communities, which lacked sanitation and hygiene regulations (Omran, 2005). The life expectancy was about 48 years due to the lack of advanced medical technology to diagnose and treat communicable infectious diseases (National Center for Health Statistics, 2011). In the 1900s, the top three leading causes of death were pneumonia/influenza, tuberculosis, and diarrhea (Sahyoun, Lentzner, Hoyert & Robinson, 2001). In response to this epidemic, public health workers advocated for improved sanitation and contamination policies. Immunizations were also developed, and medical technology improved (Omran, 2005).

Due to the advancement of medical interventions and technology, the life expectancy of an individual living today in the United States has increased to 78.8 years (National Center for Health Statistics, 2015). However, public health researchers currently question the well-being and type of quality of life the aging population will live. Well-being indicates how an individual perceives different aspects of their life such as their physical health, finances, emotional and social health (Division of Population Health, 2013). They also question how much healthcare costs will increase (Sahyoun, Lentzner, Hoyert & Robinson, 2001). The top three leading causes of death have shifted from infectious diseases to chronic diseases, such as heart disease, cancer, and stroke (Sahyoun, Lentzner, Hoyert & Robinson, 2001). These diseases are the result of behaviors such as poor nutrition and diet, lack of exercise, and alcohol abuse. Between 1990 to 2001 the diagnosis and treatment of these diseases have doubled U.S. healthcare costs for all stakeholders such as the government, employers, and their employees (Munro, 2015).
The majority of healthcare costs are spent on preventable chronic diseases (National Center for Chronic Disease Prevention and Health Promotion: Division of Population Health, 2013). Eighty percent of individuals in the United States aged sixty five years and older are diagnosed with at least one chronic disease. Fifty percent of that population is diagnosed with at least two chronic diseases and if this trend continues, the aging population will not reap the positive benefits of retirement and living a balanced quality of life (Morbidity and Mortality Weekly Report, 2003; Multiple Chronic Conditions, 2015). Most importantly, U.S. healthcare costs will continue to spike. They are projected to reach $3.2 trillion this year (Munro, 2015). Over 60 percent are spent on chronic diseases (Multiple Chronic Conditions, 2015). If action is not taken to mitigate unhealthy behaviors, these increases will continue to rise at least for the next twenty years as the baby boomers turn sixty five and begin to retire (Blumenthal, 2011).

A current solution to preventing and reducing chronic disease and decreasing healthcare costs is to implement health promotion and disease prevention activities in settings such as workplaces (Baicker, Cutler, & Song, 2010; Hansen, 2008). Since most adults spend the majority of their day at work, this type of setting can be the best place to educate and promote health among employees. Even though healthcare costs are doubling, wellness programs have been proven to save employers three to four times their investment on each employee (Hansen, 2008). Workplace wellness programs have the potential to not only lead to cost savings, but can also increase worker productivity, job satisfaction, and decrease absenteeism (Bertera, 1990; Berry, Mirabito, & Baun, 2010; Thompson, Smith & Bybee, 2005).

Since the 1980s, many organizations have developed worksite wellness programs in hopes of reducing their healthcare costs (Reardon, 1998). These programs are put in place to benefit both the employee and employer through lower insurance premiums and costs, increased
productivity, decreased absenteeism, and overall better health for the employee (Reardon, 1998; Goetzel & Ozminkowski, 2008). Through worksite wellness, employers can develop organized programs that assist employees and their families in living healthy lifestyles and thereby, reducing healthcare costs (Berry, & et al, 2010).

Given the advancement in technology, most work environments are sedentary, fast paced, and stressful. These adverse factors can lead to health problems among employees and increased healthcare costs for their employers (Sauter, Murphy, Colligian, Swanson, & et al, 1999). Most health conditions such as diabetes, heart disease, and obesity are preventable and can be treated early when signs and symptoms begin (Hansen, 2008). Most worksite wellness programs provide nutrition and fitness classes to help mitigate these adverse factors (Reardon, 1998). The Affordable Care Act requires insurers to provide coverage for obesity, one of the main risk factors of chronic disease, through services such as BMI screening and counseling (Hellmich, 2013). Providers like Cigna, who have offered weight management programs to employers for years, have now added health coaching, and group sessions to their services (Hellmich, 2013). However, studies show that individuals who are at the greatest risk for developing disease are not participating in these programs (Gebhardt & Crump, 1990).

Over the years, most research has focused on understanding and evaluating wellness programs in corporate settings. There is a need to understand wellness programs in other settings such as academic institutions. Therefore, the purpose of this research project is to: 1) explore and document case studies of nine university wellness programs in the U.S. for their key components and benchmarks; 2) explore eleven corporate and university worksite wellness programs across the U.S. through interview data from worksite wellness managers in order to assess best practices and employee engagement. The research questions for this study include: 1) What are the best
practices and program components of worksite wellness programs in corporate and academic settings? 3) What are effective strategies to engage employees in worksite wellness programs?
CHAPTER 2
REVIEW OF THE LITERATURE

2.1 Definitions of Wellness

The concept of wellness dates back to the 19th century in Europe when individuals aimed to blend spirituality and health (Miller, 2005). The idea that one’s physical health is a replication of their spiritual and mental health was known as the mind-cure movement (Miller, 2005). Before the mid-20th century, wellness was defined as no longer being ill (Miller, 2005). However, the definition has evolved. The father of wellness, Dr. Halbert Louis Dunn coined the term of wellness in the 1950s (Miller, 2005). He proposed that wellness was found to be a continuum state and a holistic approach to health (Dunn, 1959). As a result, the six-dimensional wellness model was formed by Dr. Bill Hettler, which includes: physical, social, emotional, spiritual, intellectual, and occupational wellness (LiPuma, 1993). Despite these various definitions, wellness may constitute various dimensions of health, depending on the context in which it is used (Corbin, & Pangrazi, 2001). Along with Hettler’s six-dimensional wellness model, there are countless other frameworks with five, seven, eight or twelve dimensions of wellness (Corbin, & Pangrazi, 2001). Therefore, wellness may be defined in many different ways. Some say wellness is a form of prevention; it’s a way of living, a state of being healthy, and is multidimensional (Corbin, & Pangrazi, 2001; Miller, 2005). While others just believe that one achieves wellness through evaluating his/her own standards and goals (Shillingford & Mackin, 1991).

Most worksite wellness programs have provided an environment for individuals to achieve physical dimension goals through emphasis on exercise and fitness (Corbin, & Pangrazi, 2001). However, there is increased recognition that worksite wellness programs need multiple
components to engage all dimensions of wellness, not just physical (Danna, 1999). This is evident through the need for work-life balance, where there may be an overlap of work and personal life; work environment and demanding deadlines/goals can impact personal life and health and vice versa. This phenomenon is often referred to as a spill-over effect, where work demands and stress lead to adverse physical and emotional outcomes (Danna, 1999). For the purposes of this study, wellness is multidimensional, a way of living, and a continuum state.

2.2 The history of worksite wellness programs

Worksite wellness programs are programs offered by an individual’s employer to promote health and prevent disease amongst the working class. (Thompson, Smith & Bybee, 2005). Worksite wellness programs were created from fitness programs for executives and later transitioned after World War II to providing services for all employees (Sparling, 2010; Khoury, 2014). Due to the advancement in technology after World War II, the majority of manufacturing jobs that demanded physical labor were replaced with service jobs (Chenoweth, 1998). These factors limit physical activity in the workplace, and contribute to the increasing number of employees who were obese or had chronic health conditions, which has increased healthcare costs (Chenoweth, 1998). Even today, employers who offer healthcare to their employees are hardest hit by increases in healthcare costs due to poor employee health conditions (Haberkorn, 2011). Employers are responsible for paying more than sixty percent of America’s healthcare bill (Haberkorn, 2011).

By the 1970s, many employers focused on developing worksite health programs (Khoury, 2014). Health Risk Appraisals were used to understand employees’ health status, medical history, daily activities and hobbies, life experiences, habits and demographic details (Chenoweth, 1998). An association credited for increasing interest in employee health, the
National Employee Service and Recreation Association (NESRA), estimated that there were over 50,000 employers with state of the art fitness centers at their headquarters (Chenoweth, 1998). In addition to fitness facilities, by the mid 1980’s companies offered Employee Assistance Programs to assist individuals with substance abuse, stress management, weight loss and smoking cessation (Chenoweth, 1998). Today, about ninety-five percent of organizations with 50 or more employees offer at least one health promotion activity (Kenkel & Supina, 1992; Thompson, Smith & Bybee, 2005).

### 2.3 History of Worksite Wellness Policies

By using worksites as a setting to promote health and prevent disease, many federal policies have been created to target and protect employees (Worksite Wellness, 2014). The United States constantly passes and amends laws to better protect its citizens from discrimination, privacy and safety violations, and overworking since the early 1900s (Worksite Wellness, 2014). A snapshot of these policies can be found below in Table 2.1. Along with the mandated federal policies, local governments and organizations are also allowed to set worksite wellness policies. These policies provide a framework for developing a healthy work environment (Worksite Wellness, 2014). However, each organization is responsible for their individual tailored program and policies to encourage a healthy work setting (O’Donnell, 2001).

#### Table 2.1 - Government Worksite/Labor Policy Change and Early Healthcare:

<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1798</td>
<td>First Government Healthcare Plan</td>
<td>Earliest record of health coverage: Congress establishes the U.S. Marine Hospital Service for seamen</td>
</tr>
<tr>
<td>1870</td>
<td>Employers provide employee healthcare</td>
<td>Group industrial clinics were developed. Doctors were prepaid for industrial accidents and common illnesses</td>
</tr>
<tr>
<td>1899</td>
<td>Beginning of Private Health Insurance</td>
<td>Aetna and Travelers Insurance provided coverage for temporary disability</td>
</tr>
<tr>
<td>1938</td>
<td>Fair Labor and Standards Act</td>
<td>Also known as the child labor laws; Work</td>
</tr>
</tbody>
</table>
environments for young people should be safe; the 40 hour work week and minimum wage was established

<table>
<thead>
<tr>
<th>Year</th>
<th>Act/Regulation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>The Equal Rights Act</td>
<td>Banned wage discrimination based on gender</td>
</tr>
<tr>
<td>1964</td>
<td>The Civil Rights Act</td>
<td>Banned the institution form of racial, sexual, and nationality discrimination</td>
</tr>
<tr>
<td>1970</td>
<td>Occupational Safety and Health Act (OSHA)</td>
<td>OSHA created safety standards for employers; an onsite consulting program was established to assist small businesses in developing safety and health management systems. By 1980, OSHA ruled that employers should provide doctors and employees records on working conditions and exposures</td>
</tr>
<tr>
<td>1983</td>
<td>Right to Know Regulations</td>
<td>Employees gained the right to know what chemical hazards they were being exposed to; Additionally, in 1991, California was the first state to adopt an injury and illness prevention program</td>
</tr>
<tr>
<td>1990</td>
<td>American with Disabilities Act (ADA)</td>
<td>ADA prohibits employers from discriminating against current and prospective employees. Health risk assessments (HRA) must only be given after an employment offer has been made</td>
</tr>
<tr>
<td>1996</td>
<td>Health Insurance Portability and Accountability Act (HIPAA)</td>
<td>HIPAA limits disclosure and use of an individual’s health condition, treatment, payment records, and demographics. The HIPAA privacy rule requires certain entities to request authorization from their employees</td>
</tr>
<tr>
<td>2006</td>
<td>Health Insurance Portability and Accountability Act (HIPAA)</td>
<td>HIPAA amended to split wellness programs into two categories: programs open to all no matter health status and programs that reward individuals contingent upon their health status</td>
</tr>
<tr>
<td>2008</td>
<td>Genetic Information Nondiscrimination Act (GINA)</td>
<td>This act prohibits employers from requesting employees to take a genetic test. Employees can only provide genetic information after they are enrolled in their employer’s health plan</td>
</tr>
<tr>
<td>2010</td>
<td>Affordable Care Act (ACA)</td>
<td>Small businesses are provided grants to implement wellness programs. The Centers for Disease Control and Prevention (CDC) is also required by the ACA to provide organizations with technical assistance and evaluation of their worksite wellness program. The ACA also mandates that employers provide nursing moms with private areas and unpaid break time to nurse; The value of incentives for employees reaching their health related goal increased to 30 percent.</td>
</tr>
<tr>
<td>2014</td>
<td>Affordable Care Act (ACA)</td>
<td>The amended act now sets regulations on rewards and incentives given to employees who participate in participatory wellness programs or health</td>
</tr>
</tbody>
</table>
To help shape how organizations implement and develop their health promotion programs, organizations often use Healthy People Goals provided by the Department of Health and Human Services to guide their health programs and initiatives. Healthy People Goals are designed every ten years to set the United States’ health agenda (Fitness Staff, 2011). As it relates to worksite wellness, Healthy people 2020’s goals focus on providing employees with onsite wellness centers, flu-shot clinics, and smoking cessation program (Fitness Staff, 2011). Previously, the government’s goal was to increase the number of comprehensive worksite wellness programs by 85 percent (Centers for Disease and Control, 1999). Because of these goals, about 95 percent of organizations with 50 or more employees offered at least one health promotion activity (CDC & HRSA, 1999: Kenkel & Supina, 1992; Thompson, Smith & Bybee, 2005; Chenoweth, 1998).

Resources such as funding and research are also provided by the federal government to set guidelines and frameworks for employers as they implement, and evaluate their individual program. The 2006 Surgeon General’s report on involuntary exposure to tobacco smoke, prohibiting smoking within the workplace informs organizations about the risks of exposing individuals to secondhand smoke (U.S. Department of Health and Human Services, 2006). Secondhand smoke can cause six different cancers, respiratory infections, heart disease and stroke (U.S. Department of Health and Human Services, 2006). These findings are crucial to public health workers, policy makers, and employers interested in reducing the prevalence of chronic disease. Due to these findings in 2006, over 300 organizations implemented a smoke-
free policy (U.S. Department of Health and Human Services, 2006). Smoke-free policies not only protect nonsmokers, but they have been shown to change social norms around the behavior, which has reduced cigarette smoking over the past four decades (O’Donnell, 2001).

Along with providing research, the government also provides examples of implementation through programs sponsored in federal agencies. Federal agencies are mandated to provide a health program for their employees and are permitted to build fitness facilities in their buildings, but are limited in paying membership fees or dues for their employees (Healthier Worksite Initiative: Policies, 2010). In 2002, the CDC developed the Healthier Worksite Initiative for their employees to not only focus on physical activity, but also nutrition and onsite health screenings (Healthier Worksite Initiative: About Us, 2010). Since 2002, organizations like the CDC have implemented policies like flexible work schedules, public transportation reimbursement, lactation support program, healthy food and beverages for meetings, telecommuting, and tobacco free campus policies (Healthier Worksite Initiative: Policies, 2010). Over fifty percent of employers offering wellness programs also offer benefits to the employee’s spouses and children (James, 2012). Due to the evolving worksite wellness policies and resources available to employers, many organizations offer an array of services depending upon company size, type of employer, program origin, region, and financial stability to fit the needs of their employees (Rand Corporation, 2013).

2.4 Worksite Wellness Program Components

The overall objective of worksite wellness programs is to improve employee health. Worksite wellness programs are implemented at many different leadership levels of an organization in order to engage all audiences. From a survey of major U.S. employers, it was found that worksite wellness programs offer a wide array of services from awareness programs,
disease management programs, general health and wellness programs, to basic goal setting classes (Capps, K., & et al, 2008). More specifically, disease management programs focus on prevention and maintenance for individuals with good health to individuals with chronic disease, whereas general health and wellness programs primarily provide services related to weight loss and nutrition (Capps, K., & et al, 2008).

While there are many programs and services available to an individual, the concept of worksite wellness is evolving (Reardon, 1998). An effective wellness program will assess the needs of its participants, be engaging, and open to feedback (Goetzel & Ozminkowski, 2008). Dr. Sparling’s essay on worksite wellness programs’ principles, resources and challenges discusses core principles she believes are key to a successful worksite health promotion program (Sparling, 2010). The program must be open to all employees and their families with multiple components. The workplace environment must change to promote health and provide creative incentives for participation and engagement. All leaders must also be engaged. The program must have the capability to be modified to each employees needs with an ability to track progress and goals. Finally, the program must also help to link health promotion to worksite safety (Sparling, 2010). Through these core principles, worksite wellness programs must be comprehensive to provide preventative services and onsite screening of all chronic diseases (Sparling, 2010).

A comprehensive worksite wellness program is crucial to reducing absenteeism amongst full-time employees (Betera, 1990). Worksite wellness programs are helpful in meeting employee needs. In 1988, a study was done on a comprehensive worksite wellness program. This program offered a voluntary health risk survey, and a diverse amount of group and individual classes that lasted four to ten weeks throughout the year. Classes covered topics on smoking cessation,
fitness, weight control, lipid control, stress management, and overall health. A bi-monthly health and fitness magazine was also distributed. Challenges and incentive programs were used to build a sense of community. The organization’s cafeteria and vending machines were also revamped to only offer heart healthy foods. Blood pressure testing stations and weight machine stations were placed in high traffic areas. Other program components offered during business hours were orientation, individual counseling, health risk meetings, and safety meetings. Total program costs after two years were $2,151,277. After the second year, the return on investment was about $1.42 per employee (Betera, 1990). By the end of the program, healthcare costs and absenteeism decreased, and retention increased (Bertera, 1990).

2.5 Independent (Non-insurance) Wellness Vendor vs. Insurance Wellness Vendor

From a business perspective, when choosing the appropriate services for an employer’s worksite wellness program, employers have the option to hire independent vendors or use their insurance carrier’s services. Hiring an independent vendor is costly. However, an independent vendor’s flexibility provides an opportunity to build a diverse and comprehensive program for all employees. Independent vendors can help you develop tailored programs, set a budget, set appropriate incentives, develop marketing plans, provide leadership support, collect and review data, and much more. Insurance carriers offer a variety of programs as well, but they are not meant to be tailored to the employer’s specific needs. Services provided by the insurance companies are less expensive (Bates, n.d.). Worksite wellness program expenses can be shared by multiple parties (Hall, 2011). The Affordable Care Act provides grants for small businesses to implement a worksite wellness program. Employers can also opt to charge their employees a nominal fee for classes or program registration (Hall, 2011).
Choosing between a third party vendor and one’s insurance carrier is highly based on the size of the company, budget, and the amount of time wellness/benefits managers are willing to spend. Over fifty percent of employers with less than 200 employees only offer wellness programs because of their insurance provider (Mattke, S., Hangsheng, L., Caloyeras, J., Huang, C., Busum, K.R.V., Khodyakov, D., & Shier, V., 2013). Literature suggests that employers with less than 10,000 employees rely on programs offered by their health insurance provider. Employers with over 10,000 employees are found to use both their insurance’s services and independent vendor services (Mattke, S., Hangsheng, L., Caloyeras, J., Huang, C., Busum, K.R.V., Khodyakov, D., & Shier, V., 2013). Insurance vendors only offer services to employees who are covered by the insurance carrier (Click, 2009).

### 2.6 Barriers to program implementation

With the goal of improving employee health, there are many barriers to implementing wellness programs. However, the main barriers to wellness program implementation are budget constraints, the ability to prove a positive return on investment (ROI), and the availability of sufficient resources (Global Corporate Challenge, 2013). For these reasons, many programs are not fully implemented and only offer their employees one to two activities (Global Corporate Challenge, 2013).

However, many studies have proven that a return on investment is promising after many years of employer wellness program implementation (Henke, R.M., Goetzel, R.Z., McHugh, J. & Isaac, F., 2011). According to Katherine Baicker’s meta-analysis, *Workplace Wellness Programs Can Generate Savings*, it was concluded that on average these programs can triple their savings within three years (Baicker, K., Cutler, D., & Song, Z., 2010). Her study included employers from the financial services, education, and manufacturing industry (Baicker, K., Cutler, D., &
Song, Z., 2010). However, these results are not the same for all organizations. Most organizations who experienced a greater ROI offered a wide array of services such as onsite screenings, stress management programs, and fitness and nutrition programs (“Study: Wellness programs saved $1 to $3 per dollar spent”, 2012). Other reasons for increasing ROI include diverse communications and premium reductions (“Study: Wellness programs saved $1 to $3 per dollar spent”, 2012).

Many employers still struggle to sustain employee interest and prove program effectiveness (Chapman, 2012). In order to improve program effectiveness, employers must show cost savings and quality of life improvement (Chapman, 2012). Wellness programs require a team effort from both the employer and employee (Barger, S., & et al., 2009). No worksite wellness design has yet been determined (Mills, P.R., Kessler, R.C., Cooper, J., & Sullivan, S., 2007). Improving health can be a great return on investment. However, savings may not occur until after the second year of having a wellness program (“Study: Preventing Health Risks Has Rapid Payoff”, 2012).

One of the major stakeholders within a worksite wellness program are the participants also known as the employees. With low participation rates, it can be assumed that the program is ineffective. Developers need to discuss how they will attract and persuade employees to take advantage of their employer’s program (Capps, K., & et al., 2008). Incentive programs are not enough when they are only geared towards traditional health and wellness programs (Capps, K., & et al., 2008). However, incentives on reducing insurance premiums have been proven to work (“Study: Wellness Programs Saved $1 to $3 per dollar spent”, 2012).

Employers have seen lower healthcare claims, higher morale, and greater productivity amongst its participants. Based on the 2008 NAM, ERIC, and IncentOne survey, more than 83%
of the employers estimated an increased return on investment (ROI) after one year. (Capps, K., & et al., 2008). According to Berry’s study, “What’s a hard return on employee wellness programs?”, after completing a random sample study of 185 employees and their spouses, 57% of the high risk participants were moved to low risk status. Compared to the previous year, medical claim costs decreased by $1,421 per participant (Berry, L.L., Mirabito, A.M., & Baun, W.B., 2010). Berry’s study investigated ten employers with worksite wellness programs by conducting focus groups and interviews, with the managers and employees. From his data collection, he designed six pillars to aid in developing a long lasting program regardless of the size of the organization. These pillars were multilevel leadership, alignment, quality, accessibility, partnerships and communications (Berry, L.L., Mirabito, A.M., & Baun, W.B., 2010). Each pillar is a necessity to employers because it helps them measure success through organizational metrics such as: healthcare costs, safety incidents, productivity, and organizational culture (Berry, L.L., Mirabito, A.M., & Baun, W.B., 2010). All in all, Berry’s study found that workplace wellness, when implemented correctly, can increase an employee’s trust and loyalty to their employer. Characteristics like trust and loyalty lead to reduced absenteeism and healthcare costs to the employer.

With the overarching goal of reducing medical and insurance premiums costs through improving health, it is found that most organizations look to implement long lasting wellness programs. Contrary to popular belief, researchers at the RAND corporation claim that wellness programs are short term fixes since most programs are voluntary. These volunteers could already be motivated to live a healthy lifestyle. The key to a successful program is to motivate and engage all audiences, especially the employees of greatest risk. Most employees who contribute to the increasing healthcare costs face health issues directly related to obesity and smoking.
These risk factors are behavioral changes that cannot be fixed overnight, and require a more comprehensive wellness package in order for the employer to receive a return on investment in the long run (Begley, S., 2013). However, these programs do improve one’s health, absenteeism, productivity, and corporate morale/trust (Thompson, Smith & Bybee, 2005). As an individual increases their physical activity and changes their eating habits, their energy levels will increase, leading to increased productivity. The corporate culture will also change to mirror the organizations investment in wellness.

2.7 Lack of engagement/employee participation

The key to the success of worksite wellness programs are its employees. With the inability to justify the program’s effectiveness through cost, many researchers and wellness managers look at employee participation (Thompson, Smith & Bybee, 2005). Back in the late 1970s, when worksite wellness programs were smaller and only focused on exercise, program participation was at twenty percent (Gebhardt & Crump, 1990). Still today, with all of the worksite wellness policies and incentives in place, employers continue to maintain a rate of twenty percent of employees participating in their program. In a two year study that determined how a school district’s wellness program impacted its employees, it was found that twenty percent of its employees participated in the program. The majority of the employees that participated were 50 years and older males that have been working at their job for six or more years (Aldana, Merrill, Price, Hardy, & Hager, 2005). Lack of participation is of great concern for many wellness managers. Compared to the many reported rates of twenty percent, the ideal participation rate is sixty percent (Global Corporate Challenge, 2013). Reasons for lack of participation include: work overload, lack of time and travel schedule (Gebhardt & Crump, 1990). These excuses are still true today. Eighty six percent of health and wellness managers from 378 organizations
across the globe say that lack of time is the main reason for not participating (Global Corporate Challenge, 2013). Other factors that influenced participation are barriers such as perceived discrimination, distrust in leadership, supervisor support, lack of interest, perceived cost of participation, and cultural insensitivity (Thompson, Smith & Bybee, 2005; Global Corporate Challenge, 2013). In Thompson’s study, his challenge was to be culturally sensitive in order to gain participation from individuals that are in most need since the majority of all wellness programs are voluntary (Thompson, Smith & Bybee, 2005; James, 2012). Through the Bracht 5-stage community organization model, it was suggested to include representatives of the people with the greatest need in all stages of implementation and evaluation. This is true since most wellness managers say they don’t target individuals of high risk (Global Corporate Challenge, 2013).

Creating an engaging program for all individuals is highly recommended to increase participation rates and achieve long lasting behavior change (Global Corporate Challenge, 2013). Another way to encourage participation is through the use of incentives. One controversial incentive is lower premium rates for participants and increased rates for non-participants, but there is no evidence that proves positive behavior change (James, 2012). This negative reaction to lack of participation does not promote positive long lasting behavior change. It does however; prohibit trust, and loyalty within the workplace. Instead of incentivizing programs, many studies say that to increase engagement and participation, all levels of management must participate and engage especially the front line and top managers (Sparling, 2010).

It is believed that individuals choose to participate in programs to increase physical activity, and join a support group. However, in order to sustain participation, messaging, formatting, and
delivery must be meaningful and tailored to the prospective participants (Thompson, Smith & Bybee, 2005).

According to Dr. Robert Grant’s article on bridging the gap through mobile and online technology, he believes tailored health communications techniques are not enough to change behavior (2013). People know smoking and lack of exercise is not good for them, but they continue the same negative behavior. In the 21st century, people choose convenience over health. Fast food and processed snacks are more convenient to a working individual than advance meal prepping for the work week. To mitigate these behaviors, it is believed that the use of technology will promote healthy behavior.

2.8 Why technology is important to one's continued commitment to the program?

Blogging and apps are the new tools individuals use for recreation and communication. A recent randomized study evaluated how an online well-being intervention improved their holistic health status. The program used multiple modes of communication: web, email, and mobile. Within these modes of communication, various strategies were used to increase engagement and retention: small-steps approach, game mechanics, and social networks. Overall, when compared to its control group well-being did improve as participation increased and social interaction increased (Cobb & Poirier, 2014).

Mobile technology is also used to remind individuals to take their medication, manage chronic disease through remote monitoring, chat with doctors in underserved areas, and remind patients about their doctor visits (West, 2012). Incorporating technology in worksite wellness programs can facilitate positive behavior change through its simplicity, targeted feedback, and a fun and rewarding experience through incentives and virtual support. With daily demanding schedules, real-time management with electronic devices can be an asset to worksite wellness
programs and target the most in need employees dealing with chronic diseases (West, 2012). Mobile products like the Gethealth app allows employees to log their health behaviors on the go, share with colleagues, and track their progress (Grant, 2013). Gluco Phones, allows diabetes patients to monitor and communicate their glucose test results to their doctors. iHeal is being used to discourage drug use amongst substance abusers (West, 2012).

Including technology within a worksite wellness program shows transparency and inclusivity within the workplace culture (Grant, 2013). The millennials are now entering the workforce and they use social media and their mobile devices on a daily basis. With work and family life the focus of an average individual’s day, most people would like to receive and schedule their doctor’s appointment reminders, communicate with their doctor, and review their test results via email (West, 2012).

Social media is now a main communication source due to its flexibility and accessibility to all age groups (Zagara, 2013). Recently, many app developers have developed wellness apps to engage the on the go employee and encourage them to stay committed to living a healthy lifestyle (McLeod, 2013). With the idea of engagement, some wellness app developers have incorporated the concept of gamification; where game designs are incorporated into non-game apps to encourage social support and interaction (McLeod, 2013). Many employers and employees are intrigued by the new idea. According to the GetHealth blog, an employee who uses their app as a part of her company’s wellness program says, “I’m enjoying the app, and do find it motivational. It’s certainly kicked up the competitive drive @ the office” (2013).

2.9 Summary

The United States’ healthcare system constantly adapts to the needs of its population. Currently, there is a need to address the increasing prevalence rate of diabetes and cardiovascular
disease. Many researchers believe this can be done through the creation of worksite wellness programs. Over the years workplace wellness programs have transitioned from general nutrition and fitness only programs to tailored preventative care services for their employees. Worksite wellness programs have been proven to reduce healthcare cost and absenteeism, improve employee morale, productivity, and retention. With the many resources and incentives available to employers, the number of worksite wellness programs is increasing. The majority of the research reflects worksite wellness programs within a corporate setting. However, this paper sets out to contribute to previous literature by investigating eleven worksite wellness programs from both the corporate and university setting. A recent pilot study on the worksite wellness program at Washington University in St. Louis, Missouri proved to be effective through its accessibility and convenience to all (Butler, Clark, Burlis, Castillo, & Racette, 2015). However, Washington University only focused on the physical aspect of wellness (Butler, Clark, Burlis, Castillo, & Racette, 2015). Worksite wellness programs should offer services to impact all of the dimensions of wellness. Since an individual’s workplace is a breeding ground for risk behaviors that cause diabetes and cardiovascular disease such as elevated stress levels, unhealthy eating and drinking behaviors, and lack of physical activity.
CHAPTER 3
PREVENTING CHRONIC DISEASE

ABSTRACT

As healthcare within the United States continues to evolve, novel and innovative programs are needed to address the top three leading causes of death, which are largely lifestyle and behavioral related: heart disease, cancer, and stroke. About 50% of U.S. adults have at least one chronic disease. Entities such as the government, employers, and employees are responsible for paying for America’s healthcare bill; 60% U.S. healthcare is paid by employers. A current solution to reducing healthcare costs and the prevalence of chronic disease are worksite wellness programs, which increasingly are being adopted by employers. The purpose of this study is to conduct secondary analysis to assess worksite wellness program components and best practices as defined by program managers within the corporate and university settings. Qualitative analyses was undertaken to analyze and identify common themes from case studies of nine university wellness programs and interview transcripts from the perspective of eleven wellness program managers from the corporate and university settings. The study findings suggest that programs within the university setting target multiple population demographics. They also seek to improve more than the physical dimension of wellness. As mentioned by the program managers, previous literature, communication, consistency, and components that address multi-dimensions are found to be the best practices of their program. To engage program participants, it is suggested that program managers should seek to expand their programs, collaborate, communicate, and be consistent. To confirm these findings, future studies that use a larger sample of universities and corporations should further assess program components and employee participation.
INTRODUCTION

The United States’ evolving healthcare system constantly adapts to the needs of its population to combat disease. As a result of medical advances, the leading causes of death have shifted from infectious diseases to chronic diseases, such as heart disease, cancer, and stroke (Sahyoun, Lentzner, Hoyert & Robinson, 2001). As healthcare costs continue to rise, chronic diseases must be targeted at all three levels of prevention, primary (i.e. education nutrition and fitness), secondary (i.e. blood pressure screening or blood sugar test) and tertiary (i.e. chronic disease management programs) (Munro, 2015).

The workplace has been identified as one of many settings through which health promotion and disease prevention can be addressed because working adults spend the majority of their time in the workplace (Baicker, Cutler, & Song, 2010; Hansen, 2008). Even though healthcare costs are doubling, worksite wellness programs have been proven to save employers three to four times their investment on each employee (Hansen, 2008). Worksite wellness programs not only lead to cost savings, but can also increase worker productivity, job satisfaction, and decrease absenteeism (Bertera, 1990; Berry, Mirabito, & Baun, 2010; Thompson, Smith & Bybee, 2005).

Over the years, worksite wellness programs have transitioned from general nutrition and fitness-only programs to tailored preventative care services for their employees (Khoury, 2014). With the many resources and incentives available to employers, the number of workplaces implementing wellness programs is increasing, which has traditionally been observed within corporate settings. Therefore, much of the research on worksite wellness programs have been focused on corporate environments. There is currently little information about wellness programs in other settings such as academic campuses. Academic campuses are a unique setting in that
they include young adults and the older adult population from multiple disciplines. Therefore, the purpose of this exploratory research is: 1) to document key components and benchmarks of wellness programs in the U.S. using case studies of nine university programs and; 2) to assess best practices and employee engagement using interview data from eleven corporate and university worksite wellness program managers across the U.S.

METHODS

The current study utilizes a content analysis using case studies and interview transcripts of wellness program managers as the data source. For objective 1, an analysis of existing case studies on nine universities was conducted to understand the components of wellness programs within academic settings. For each case study, the following characteristics were assessed: health-related policies (e.g. tobacco free campus, high risk drinking), target population (e.g. students, staff), main goals of the program (e.g. create a healthy campus community), communication goals of the program (e.g. continuous communication), technology or social media used in programs (e.g. Facebook, Instagram), dimensions of wellness addressed in the program (e.g. physical, emotional, environmental), program activities offered (e.g. Yoga classes, cooking classes, tobacco cessation programs), program funding (e.g. costs), and evaluation processes and methods (e.g. surveys, focus groups). Researchers have indicated that these characteristics lead to healthcare cost savings and a positive return on investment (Betera, 1990; Berry, Mirabito, & Baun, 2010; Study: Wellness Programs Save $1 to $3 per dollar spent, 2012).

The characteristics and components of the programs were predetermined and therefore the analysis utilized a inductive approach. In addition, for the dimensions of wellness the model developed by Dr. Bill Hettler, was utilized. Hettler developed a model based upon Halbert Dunn’s hypothesis that wellness is a continual multi-level state (Dunn, 1959). Therefore, the Six
Dimensions of Wellness from the National Wellness Institute are used to assess whether programs within the academic setting address the needs of the whole person (Hettler, 1976). The Six Dimensions of Wellness that were utilized in the analysis include: Occupational, Physical, Social, Intellectual, Spiritual, and Emotional (Hettler, 1976). Each dimension was only counted once within each case study, regardless of how many times a dimension occurred in a case study. The case studies were initially examined as a whole and then examined for codes and themes...

For objective 2, existing interview transcript data from four corporate worksite wellness program managers and five university worksite wellness program managers from across the United States were analyzed. These interviews were a part of Georgia State University’s Report on Investment Returns for Wellness Programs. The findings were used to understand various aspects about the wellness programs from the perspective of the program wellness managers. Program wellness managers work directly with their employer’s worksite wellness program and serve as an important source from which to understand how wellness programs work.

In addition to the nine existing interview transcripts, eight wellness managers were originally chosen through the researcher’s contacts to participate in the confidential telephone interview in the summer of 2015 to further explore program components, program participation by employees, and program engagement by employees, which were not assessed in the existing nine interviews. The participants were contacted by email, given information about the study, and asked to participate voluntarily in the study. Upon receiving consent, two supplementary telephone interviews were conducted with two program managers.

The two interviewees were asked four additional questions about employee behavior, choices, and beliefs about the respective worksite wellness programs. All interview questions can be found in Table 1. The telephone interviews were manually transcribed. All interviews were
coded and common themes identified. Georgia State University Institutional Review Board reviewed and approved the interviews with wellness managers.

RESULTS

Case Study Components

Among the nine university case studies examined, three of the universities were from the south, two universities were from the northeast, two universities were from the southwest, one was from the west, and one was from the northeast; 5 public and 4 private. Five of the institutions did not mention any policies that are in place. However, for the institutions that did mention policies, smoke free/tobacco free campus policies were the most frequently mentioned; then HIPAA policies, mental health stigma policies, and high-risk drinking policies. Seven of the worksite wellness programs mentioned targeting faculty and staff, six mentioned targeting students, and three mentioned targeting the university as a whole. Other targeted parties mentioned were faculty and staff dependents, the administration, alumni, community, retirees, academic peers, and other health organizations.

Eight of the universities mentioned the main goal of their program was to create a healthy unbiased, all-inclusive campus community, and collaborate with outside organizations. The main goal of these programs can be found within Table 2 and Figure 1. Only one university mentioned making healthcare costs effective as a main goal, and two universities mentioned increasing participation and enhancing engagement as a main goal of the wellness program.

From a technological and communication standpoint, most institutions aim to foster a community that supports multi-modal communication with consistent messaging. Other communication goals mentioned were to market programs, increase awareness, and tailor communication strategies. The most frequent mode of communication used by these nine
universities was the internet for a wellness website, messaging campaigns, social marketing, social media, and email. The usage of newsletters, a master calendar, and a mobile app were only mentioned by one university.

In the assessment of program components, six dimensions of wellness were examined and identified. The most frequently identified dimensions were social (8) and physical (8), and the least frequently identified were intellectual (2) and spiritual (2) (Figure 2). Additionally, environmental (3) and financial (1) were identified (data not shown). The majority of services offered were related to physical fitness (Table 2). Other services offered were smoking cessation, stress management, toastmasters, alcohol education, lifestyle coaching, and specialty programs for international students.

Five of the institutions reported limited funding and high costs due to the fact that their resources were obtained from foundations, fundraisers, grants or a minimal budget. Lastly, to evaluate the nine institutions’ wellness program, the most frequent types of evaluations mentioned were program, process, and outcome evaluation. Five universities gathered their data from health risk and health status assessments. Other mentioned assessment factors were cost benefit/effectiveness, participation rates/satisfaction, health care utilization, and disability.

Program Manager Perspectives

The interview transcript data consisted of the perspectives of wellness program managers from 5 universities and 6 corporate organizations. These organizations were located in the following regions: south (5); east (3); north (1); northeast (1); and an unknown region (1). Of the 11 programs, 7 have been in existence for at least ten years. They are located in the south, north, east, northeast, and the unknown region. These programs began providing health education and awareness, biometrics screenings, gym memberships, and flu shots. Now they have gradually
added more programs and services such as nutrition, fitness assessments, and insurance discounts (Table 6).

Program managers frequently mentioned that their programs provided their employees the following: fitness services, education classes, nutrition education, biometric screening, and gym membership. Other services mentioned were onsite clinics, smoking cessation, and team outings. The most successful program initiatives for engaging employees discussed by managers were health insurance biometric assessments within the corporate setting and fitness contest/challenges within the academic setting. Overall, the most frequently reported major challenge wellness managers faced were the ability to provide tailored nutrition and fitness programs for employees, and a lack of access to claims data (data not shown). Program managers within the corporate setting reported lack of employee participation, program consistency, and access to claims data. Program managers within the academic setting reported having challenges with planning complicated programs, receiving facility criticism about the lack of up to date weight machines and lockers, and the lack of access to claims data.

Three program managers (1 corporate and 2 academic) reported using assessment data to implement and evaluate targeted program components for specific health problems that were found to be prevalent. Three program managers (2 corporate and 1 academic) used marketing and the other program managers mentioned using incentives, onsite clinics, and subsidized memberships to target participants. However, two program managers from the corporate setting mentioned that they do not target any particular health concerns of the participants. The reasons varied from the organization being too small to HIPAA regulate their access to data. The HIPAA Privacy Rule specifically impacts the ability to target health issues by protecting the privacy of employee health records. The average participation level within 6 of the 11 program managers’
program is sixty percent. In addition, in the two supplemental interviews, managers indicated some employees did not participate in their programs because they were already engaged in an outside program (i.e. Weight watchers, personal trainer). However, they did agree that employees would choose an employee sponsored program over an outside program. Overall, amongst all 11 programs, their costs varied by program offerings and organization. Program managers also mentioned communication, consistency, and components that address multi-dimensions are found to be the best practices of their program.

DISCUSSION

To date, minimal studies have been published on worksite wellness programs within academic settings. The present study provides preliminary new knowledge about wellness programs emerging in public and private universities across the country. The programs examined suggest that within the university setting, they are characterized as multi-dimensional, all-inclusive, and data driven. These programs within the university setting have over 17 years of experience with developing wellness programs. Even though, the primary components of the program are nutrition and fitness, the findings also suggest that worksite wellness programs within the university setting seek to develop the whole person. This also includes their mental (emotional), spiritual, social, occupational, intellectual, financial, and environmental health.

The dimensions of wellness extend far beyond the six dimensions of wellness. Wellness may be defined in many different ways. Along with Dunn’s six-dimensional wellness model, there are countless other frameworks with five, seven, eight or twelve dimensions of wellness (Corbin, & Pangrazi, 2001). Additionally, due to the lack of financial education, financial wellness can impact an employee’s stress level and absenteeism (Joo & Garman, 1998). Lastly, the environmental dimension of wellness plays a significant role on an employee’s stress,
emotional stability, and cancer exposure (Laconsay, 2014). Financial and environmental wellness were not originally included in this research’s wellness model (Figure 2), but were cited within the case study data. Therefore, previous literature and data prove that different dimensions should be included within a program’s framework.

Findings also suggest the importance of data and evaluation in order to maximize the program’s vision and goals. For example, the progress of each participant is identified through data such as: demographic, health risk assessments and health claims. In general, worksite wellness programs within the academic setting are structured similarly to programs cited within previous literature to evaluate the needs of their participants, implement engaging programs, and receive feedback (Goetzel & Ozminkowsk, 2008). Data helps wellness initiative teams categorize individual health problems (i.e. high, medium, and low risk) and tailor programs and marketing campaigns specifically to each type of participant.

The findings from the interviews of corporate and university wellness managers indicate that data are needed to confirm their program’s effectiveness. However, interview transcripts from program managers suggest challenges with accessing their claims data. Claims data provides a useful way to measure program results over a period of time because they provide indicators of healthcare utilization that can be tracked before and after healthcare implementation. Furthermore, the findings from claims data can further refine their program. Along with program managers other stakeholders such as insurance providers and human resources can use claims data to identify gaps within their program, and measure results to maximize healthcare savings. (Mattke, Hangsheng, Caloyeras, Huang, Busum, Khodyakov, & Shier, 2013) Therefore, with limited access to claims data, program managers used other factors to measure effectiveness: engagement, participation, health risk factors, program expansion, and
absenteeism, which is consistent with previous literature (Berry, Mirabito, & Baun, 2010; Thompson, Smith & Bybee, 2005). This is also found to be true amongst the two additional program managers interviewed. Access to claims data is found to be challenging.

The interview transcripts and case studies used in this research investigate different institutions across the United States. However, the research would have gained more depth in understanding how their programs have evolved and their best practices, if the same universities were used within the case studies and interviews. From the interviews one of the university program managers mentioned their university’s program started 17 years ago out of their College of Nursing. Now this university has expanded and currently provides fitness and nutrition services for both students and faculty. However, as this program has grown it is unknown what policies have been implemented to protect the campus community from unhealthy behaviors.

Through the case studies, several university-wide wellness policies were identified. The most frequently identified policy was smoke-free policies; this regulation is crucial for reducing secondhand smoke. Secondhand smoke can cause six different cancers, respiratory infections, heart disease and stroke (U.S. Department of Health and Human Services, 2006). Smoke-free policies not only protect nonsmokers, but they have also been shown to change social norms around the behavior, which has reduced cigarette smoking over the past four decades (O’Donnell, 2001). Additionally, policies focused on reducing mental health stigma and reducing high risk drinking were identified among two universities and is supported by previous studies that document these policies (O’Donnell, 2001).

Policies provide a way for worksites to provide supportive environments for employees to make positive behavior change. In recent years, onsite healthy catering options, and food labeling policies have been added as strategies that can encourage positive behavior change.
Nutrition policies reinforce nutrition classes and programs in place by providing access to healthy food through vending machines, cafeterias, and restaurants inside the workplace. Healthy catering policies also outline best practices for caterers at company functions. Finally, food labeling policies provide employees information to emphasize messaging and make individuals aware of what is in the food they are choosing to consume (O’Donnell, 2001).

There are at least five limitations within this study. First, the case studies and interview transcripts are not generalizable to all universities and corporate organizations. The case studies and interviews were done by convenience sampling. These selected universities were accessible and easy to recruit. Another limitation comes from the inability to understand the socioeconomic and demographic factors of all of the participants. Socioeconomic and demographic data are only provided on the students of the universities. From the research findings, worksite wellness programs within the university setting targets multiple audiences: students, faculty, staff, administration, alumni, and the external community. Similar socioeconomic and demographic data will provide another way to compare organizations to each other. Thirdly, when interviewing program managers, recall bias may have occurred when discussing program changes over a period of time or extremely successful programs. Fourthly, since a content analysis was used to interpret the results within this research to examine themes, this research is vulnerable to the interpretation of the researcher’s understanding. However, the conclusions can be justified in Tables 2 and 3. Lastly, the data lacked an understanding of how to sustain each program. The data within this study provided a retrospective and current view of the wellness programs. Besides the vision, goals, and objectives of the university programs within the case studies, no other information is provided on the longevity of each program. Previous literature suggest programs should be implemented to last longer than five years to measure cost
effectiveness (“Study: Preventing Health Risks Has Rapid Payoff”, 2012). Program sustainability is important to maximize program longevity.

The data as a whole is insightful, and useful for organizations looking to implement and/or evaluate their programs. Based on the findings from this research, for a company with at least fifty employees, the program managers should perform a needs assessment within the organization, organize bi-weekly roundtable discussions, which includes representation from the executive team, board of directors, middle managers, front line managers, full time employees, recent hires, part time employees and temporary hires to begin developing a worksite wellness program. These roundtable discussions are key to deciphering the needs of the employer and its employees. After program implementation, success should be measured through data. The data should include information such as employee’s beliefs, pre/post health status, participation rate, services used, time of day certain services are used, and changes in healthcare costs.

Organizations discussed in the case studies and interview transcripts represent each region of the United States. The costs of each program varied no matter the size of the organization, and institutional classification (i.e. public, private). Costs are dependent upon the services offered and collaboration with external organizations. Additional research should take place to test how collaborating with other organizations can decrease program costs, and benefit the worksite wellness program as whole. Another major finding from this study was the best practices of many of the programs within this study; communication, consistency, and diversity. Most programs, especially the programs within a university setting, plan to foster a community that supports and promotes wellness, and uses communication to enhance their program and provide consistent messaging. These findings are also true amongst previous research on how to sustain behavior through constant and tailored messaging (Thompson, Smith & Bybee, 2005).
Communication between all tiers of an organization initiates consistency and constant communication. These are needed to create higher morale, engage employees, increase wellness participation, and create a positive culture within the community.

As shown in the data, worksite wellness programs potentially create a cyclical effect on the local communities. University programs seek to partner with local organizations and communities to reach external audiences and inspire a cultural shift towards preventative health. Worksite wellness programs have an opportunity through collaboration to lead and guide their local community to living a healthy lifestyle. This organizational shift helps to determine local and state policies through consistent messaging and reinforcement through informal arenas such as voting, the local radio broadcast station, and the community’s buying power. In the future, this cyclical model should be replicated within the large corporate setting, especially within organizations composed of a main headquarters and nationally-distributed offices who seek to provide consistent programming for all of its employees.

Studies should also focus on other measures of program effectiveness such as behavior change and organizational results (i.e. decrease in health care costs, lower labor costs, decrease in absenteeism and increased labor productivity) within both the university and the corporate setting. These factors are vital to impacting the chronic disease epidemic. The top three leading causes of death: heart disease, cancer, and stroke, are the result of health risk behaviors such as poor nutrition and diet, lack of exercise, and alcohol abuse (Sahyoun, Lentzner, Hoyert & Robinson, 2001). The diagnosis and treatment of these diseases have also doubled U.S. healthcare costs from 1990 to 2001 for all stakeholders such as the government, employers, and their employees (Munro, 2015). As the environment in the workplace shifts towards health promotion, the prevalence of health risk behaviors will also shift.
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Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.


APPENDIX

List of Tables

Table 2.1 Government Worksite/Labor Policy Change:
Table 3.1 Interview Questions
Table 3.2 The 9 case studies and their characteristics by location
Table 3.3 A summary of the eleven programs referenced by the wellness managers during their interviews
<table>
<thead>
<tr>
<th>Year</th>
<th>Policy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>Fair Labor and Standards Act</td>
<td>Also known as the child labor laws; Work environments for young people should be safe; the 40 hour work week and minimum wage was established</td>
</tr>
<tr>
<td>1963</td>
<td>The Equal Rights Act</td>
<td>Banned wage discrimination based on gender</td>
</tr>
<tr>
<td>1964</td>
<td>The Civil Rights Act</td>
<td>Banned the institution form of racial, sexual, and nationality discrimination</td>
</tr>
<tr>
<td>1970</td>
<td>Occupational Safety and Health Act (OSHA)</td>
<td>OSHA created safety standards for employers; an onsite consulting program was established to assist small businesses in developing safety and health management systems. By 1980, OSHA ruled that employers should provide doctors and employees records on working conditions and exposures</td>
</tr>
<tr>
<td>1983</td>
<td>Right to Know Regulations</td>
<td>Employees gained the right to know what chemical hazards they were being exposed to; Additionally, in 1991, California was the first state to adopt an injury and illness prevention program</td>
</tr>
<tr>
<td>1990</td>
<td>American with Disabilities Act (ADA)</td>
<td>ADA prohibits employers from discriminating against current and prospective employees. Health risk assessments (HRA) must only be given after an employment offer has been made</td>
</tr>
<tr>
<td>1996</td>
<td>Health Insurance Portability and Accountability Act (HIPAA)</td>
<td>HIPAA limits disclosure and use of an individual’s health condition, treatment, payment records, and demographics. The HIPAA privacy rule requires certain entities to request authorization from their employees</td>
</tr>
<tr>
<td>2006</td>
<td>Health Insurance Portability and Accountability Act (HIPAA)</td>
<td>HIPAA amended to split wellness programs into two categories: programs open to all no matter health status and programs that reward individuals contingent upon their health status</td>
</tr>
<tr>
<td>2008</td>
<td>Genetic Information Nondiscrimination Act (GINA)</td>
<td>This act prohibits employers from requesting employees to take a genetic test. Employees can only provide genetic information after they are enrolled in their employer’s health plan</td>
</tr>
<tr>
<td>2010</td>
<td>Affordable Care Act (ACA)</td>
<td>Small businesses are provided grants to implement wellness programs. The Centers for Disease Control and Prevention (CDC) is also required by the ACA to provide organizations with technical assistance and evaluation of their worksite wellness program. The ACA also mandates that employers provide nursing moms with private areas and unpaid break time to nurse; The value of incentives for employees reaching their health related goal increased to 30 percent.</td>
</tr>
<tr>
<td>Year</td>
<td>Act</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-----</td>
<td>-------------</td>
</tr>
<tr>
<td>2014</td>
<td>Affordable Care Act (ACA)</td>
<td>The amended act now sets regulations on rewards and incentives given to employees who participate in participatory wellness programs or health contingent wellness programs. Individuals who participate in health contingent wellness programs are protected from discrimination and the inability to qualify for incentives being offered due to their high risk status</td>
</tr>
</tbody>
</table>
Table 3.1. - Interview Questions

*Questions in bold were added to the primary research to explore program participation and engagement within the worksite wellness program.

1. Please identify and/or verify components of your employer’s wellness program
2. How long has the program been there and have there been any changes in the program?
3. What are your extremely successful programs?
4. **Challenges (added this question after initial analysis)**
5. How do you target certain group of participants?
6. What is the participation level of the employees?
7. What is the cost of the program to the organization?
8. Do you measure results? If yes, how?
9. **Why would employees choose not to participant in your program?**
10. **Most employees rather choose to participate in employer sponsored program than public program. Do you agree or disagree?**
11. **Would you participate in your employers’ online fitness challenge through social networks like Facebook? Why or why not?**
12. Do you receive any employee feedback? If, yes, how?
13. **What do employees say about the program?**
14. Do you design your program on the basis of the Demographic information?
15. What was the reason to select these programs?
16. Do you offer incentives? What kind of incentives do you offer?
17. Can you name some of best practices for your organization?
### Table 3.2 The 9 case studies and their characteristics by location

<table>
<thead>
<tr>
<th>Location</th>
<th>Health-related policies</th>
<th>Target Population</th>
<th>Main Goals</th>
<th>Communication Goals</th>
<th>Dimensions of wellness addressed in the program</th>
<th>Program activities offered</th>
<th>Program funding</th>
<th>Technology or social media used in programs</th>
<th>Evaluation processes and methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>smoke-free policies; privacy policies</td>
<td>Faculty, staff, students, and university-wide</td>
<td>to provide the health and well-being of the university community; demonstrate cost-effective health care as a model for other institutions; and advance public discussions and social commitment</td>
<td>to launch a communication campaign to help people to action around health improvement</td>
<td>Social, Physical, Mental, Emotional, Environment</td>
<td>Alcohol Education, Tobacco Education, Cooking and Fitness</td>
<td>N/A</td>
<td>Online tools related to ergonomics, mental and emotional health, online follow-up, survey data collection, coaching based on questionsnaires</td>
<td>evaluated within 5 years, internal and program participation, patient satisfaction, changes in health risk and health behavior, impact on health care utilization, workers' compensation and disability</td>
</tr>
<tr>
<td>Northeast</td>
<td>tobacco free campus</td>
<td>Students, faculty and staff</td>
<td>to sustain current smoking cessation leadership support, and to reduce the redundancies of programs, support staff and the potential for future sustainability and success and to evaluate the effectiveness of the programs with off-campus neighbors</td>
<td>to centralize web content, teaching and marketing, effectively market programs to their intended audiences</td>
<td>Physical, Spiritual, Emotional, Social</td>
<td>Healthy Advisory, wellness website, wellness fair, health services, nutritional classes, fitness classes, personal training, outdoor activities, a physical activity day night, group events like night of the gory, walking and running programs, stress management (counselling services and orientation), and spirituality programs</td>
<td>N/A</td>
<td>Online tools related to ergonomics, mental and emotional health, online follow-up, survey data collection, coaching based on questionsnaires</td>
<td>evaluated within 5 years, internal and program participation, patient satisfaction, changes in health risk and health behavior, impact on health care utilization, workers' compensation and disability</td>
</tr>
<tr>
<td>Northeast N/A</td>
<td>Faculty, staff, students, and administration</td>
<td>Students, faculty and staff</td>
<td>to create a cultural shift towards tobacco cessation, to be inclusive of all, cease an existing centralized resource</td>
<td>to increase awareness to tobacco cessation in tobacco and staff, and 50% per students, increase participation by 50%, utilize new technology, social media and teaching strategies</td>
<td>Physical, Emotional, Environmental, Occupational, Personal, Financial</td>
<td>Athletics, Clubs, Greek Organizations, Live and Learn, University Housing, Counseling and Psychological Services, Recreation, University, Transportation (biking), Nutrition, Cooking and Nutrition, Wellness Center, complete for employees, seminars for life skills and planning, academic courses related to health and wellness, yoga, meditation, and relaxation</td>
<td>N/A</td>
<td>Costs are minimal; they utilize current resources and the University's programs</td>
<td>Website: Facebook, Twitter, Newsletter, Master calendar</td>
</tr>
<tr>
<td>South</td>
<td>tobacco free campus</td>
<td>Faculty, staff, students, and administration</td>
<td>to make resources, programs and facilities easily accessible, to reach new and diverse audiences, and to increase participation, leverage the medical plan to support health and wellness initiatives</td>
<td>to establish a well-being program that integrates tobacco cessation</td>
<td>Environmental, Physical, Emotional, Social, Occupational</td>
<td>Environmental, Personal, Social, Occupational</td>
<td>N/A</td>
<td>Physical, Mental, Emotional, Social, Economic</td>
<td>Webinar, Cares, Weight watchers at Work, Faculty and Staff Assistance Programs, 'SHINE Up Wellness Center, Goodwill, BeSmokefree, Asthma and Obesity, Management of Health, lifestyle coaching, Corporate Run, Nutrition and Wellness, Education, Wellness Incentives, Thrive Initiative, Health Education Campaign</td>
</tr>
<tr>
<td>South N/A</td>
<td>N/A</td>
<td>Students</td>
<td>to embrace the importance of multi-dimensional wellness programs, to reach the community, students, faculty, staff and their dependents</td>
<td>to communicate continuously using various media to reach the population</td>
<td>Physical, Emotional, Environmental, Occupational, Social, Professional</td>
<td>Physical Health, Emotional Health, Mental Health, Social Health</td>
<td>N/A</td>
<td>Physical, Mental, Emotional, Social, Environmental</td>
<td>N/A</td>
</tr>
<tr>
<td>South N/A</td>
<td>The community, faculty, staff, and students, and administration</td>
<td>The community, faculty, staff, and students, and administration</td>
<td>to be an active and healthful for the community, students, faculty, and staff</td>
<td>to foster an environment that supports communication, participation, and satisfaction of staff</td>
<td>Occupational, Physical</td>
<td>Health Hut, HIV Testing, Presentations, Civil Tobacco, Wellness Coaching for Academic Success</td>
<td>N/A</td>
<td>Physical, Mental, Emotional, Social, Environmental</td>
<td>N/A</td>
</tr>
<tr>
<td>Southwest</td>
<td>N/A</td>
<td>N/A</td>
<td>The community, faculty, staff, and students, and administration</td>
<td>to foster an environment that supports communication, participation, and satisfaction of staff</td>
<td>Occupational, Physical, Social</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Southwest</td>
<td>N/A</td>
<td>Campus community</td>
<td>to create and sustain a healthy campus community</td>
<td>to promote the wellness network and other health and wellness programs and the university initiatives, services and resources for members of the community</td>
<td>Social, Physical</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>West</td>
<td>N/A</td>
<td>Faculty, staff, students, and other health organizations</td>
<td>to collaborate with existing programs that focus on the topic</td>
<td>to facilitate the work of the research faculty and to research on drug and alcohol prevention</td>
<td>Physical, Social</td>
<td>Employee Incentive Program, Volunteer, Wellness Fair, Uchemed events recognition, weight loss challenge</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Table 3.3. - A summary of the eleven programs referenced by the wellness managers during their interviews

<table>
<thead>
<tr>
<th>Location</th>
<th>Setting</th>
<th># of years the program has been in existence</th>
<th>Services provided at the beginning</th>
<th>Services currently provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>Corporate (Small business)</td>
<td>4 years</td>
<td>Tracked food logs and exercise, weekly coaching</td>
<td>Changed providers and he took measurements for body fat and weight at the beginning, did an email on a nutrition subject each week and monthly visits/weigh-in.</td>
</tr>
<tr>
<td>South</td>
<td>Corporate (Small business)</td>
<td>14 years</td>
<td>N/A</td>
<td>Pay fees and costs of gym membership, pay a base amount of insurance</td>
</tr>
<tr>
<td>North</td>
<td>University</td>
<td>16 years</td>
<td>Education and awareness</td>
<td>Provide a comprehensive health management</td>
</tr>
<tr>
<td>N/A</td>
<td>Corporate</td>
<td>10 years</td>
<td>flu and gym memberships</td>
<td>Gradually add more components to it. Most of the clients added biometrics as a component</td>
</tr>
<tr>
<td>East</td>
<td>Corporate (large company)</td>
<td>20 years</td>
<td>N/A</td>
<td>Pushing more for the wellbeing of the employees</td>
</tr>
<tr>
<td>Northeast</td>
<td>University</td>
<td>20 years</td>
<td>Biometrics - pre and post fitness test</td>
<td>Post fitness test are optional, added nutrition program</td>
</tr>
<tr>
<td>South</td>
<td>Corporate (Small business)</td>
<td>9 years</td>
<td>EAP</td>
<td>N/A</td>
</tr>
<tr>
<td>East</td>
<td>University</td>
<td>17 years</td>
<td>Smaller program</td>
<td>University wide; more robust assessments, risk analysis, health assessments, increasing the variety of programs</td>
</tr>
<tr>
<td>East</td>
<td>University</td>
<td>17 years</td>
<td>started out of College of Nursing</td>
<td>Added healthy eating and weight</td>
</tr>
<tr>
<td>Location</td>
<td>Type</td>
<td>Benefits Provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South University</td>
<td>N/A</td>
<td>with nutrition programs, management, lunch and learn, BMI, Blood Pressure, Individual fitness assessment, recreation services for students, free employee only fitness center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>South</td>
<td>Corporate (Small business)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
List of Figures

Figure 1 Main Goals of the wellness program within the university setting listed in the case study data

Figure 2 Percentage of Universities offering programs within each dimension of wellness as described within the case study data
Figure 1 - Main Goals of the wellness program within the university setting listed in the case study data
Figure 2 - Percentage of Universities offering programs within each dimension of wellness as described within the case study data.

<table>
<thead>
<tr>
<th>Six Dimensions of Wellness</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual</td>
<td>22%</td>
</tr>
<tr>
<td>Spiritual</td>
<td>22%</td>
</tr>
<tr>
<td>Occupational</td>
<td>56%</td>
</tr>
<tr>
<td>Emotional</td>
<td>67%</td>
</tr>
<tr>
<td>Physical</td>
<td>89%</td>
</tr>
<tr>
<td>Social</td>
<td>89%</td>
</tr>
</tbody>
</table>