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Employee work and health behaviors : the role of leadership support for health promotion and organizational health climate.

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EMPLOYEE WORK AND HEALTH BEHAVIORS:
THE ROLE OF LEADERSHIP SUPPORT FOR HEALTH PROMOTION
AND ORGANIZATIONAL HEALTH CLIMATE

By

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DEDICATION

      This dissertation is dedicated to my family and friends. To the memory of my

mother, Sharon Woloszyk, who taught me to strive to do my best in all things. To my

father, Gerard Woloszyk, who encourages me to believe in my dreams and in my ability

to achieve them. To my husband, Devin, who is my constant support and

encouragement. To our children, Donovan and Garrett, who remind me that life is simple

and inspire me to plant seeds that will change the future. To my in-laws, Don and Trish

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ABSTRACT

EMPLOYEE WORK AND HEALTH BEHAVIORS:

THE ROLE OF LEADERSHIP SUPPORT FOR HEALTH PROMOTION

AND ORGANIZATIONAL HEALTH CLIMATE

Jennifer W. Hoert

March 25, 2014

Worksite wellness programs have historically focused on the modification of individual employee behavior (e.g., Shepard, 1981). Scholars have recently engaged in a discussion about the role the workplace environment plays in employee health behavior (e.g., Golaszewski, Allen, & Edington, 2008). The present correlational study contributes to this conversation by defining the relationship between employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate and its impact on employee health and work behaviors and attitudes; and by examining the extent to which variance in work and health behaviors may be accounted for by employees' perceptions of leadership support for health promotion and by employees' perceptions of organizational health climate. Online and paper-based surveys were used to collect data from the employees ($n = 621$) at four organizations in the southeast United States.

Study findings indicated that employees' perceptions of leadership support for health promotion were predictive of employee participation in wellness program

activities. The study also found that employees' perceptions of organizational health climate were predictive of job satisfaction, job stress, and employee engagement. Overall, the results of this study confirm the importance of leadership support for health promotion and organizational health climate in the strategic development, management and continuation of workplace wellness.

These findings have important implications for practice as employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate were found to be key leverage points for employee participation in wellness activities and for employee health behavior change. Future research can extend these findings by continuing to bridge the organizational behavior, management, and human resource development research with the public health research on workplace wellness.

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INTRODUCTION

The majority of today's workforce is known to have at least one chronic disease (Partnership for Prevention, 2009). The most prevalent chronic diseases are heart disease, cancer, diabetes, arthritis, and obesity. The Centers for Disease Control have identified four modifiable behaviors that are responsible for much of the illness, disability, and premature death related to chronic disease: (a) tobacco use, (b) excessive alcohol use, (c) insufficient physical activity, and (d) poor eating habits (Centers for Disease Control and Prevention, 2009).

The burden of chronic disease continues to grow in the United States, and part of this burden is being shouldered by employers (Mattke, Schnyer, & Van Busum, 2012). For the last twenty years, worksite wellness programs have become a growing means of addressing these public health concerns that have decreased company profits because of the increased health care expenses related to chronic diseases (Goetzel et al., 2004; Loeppke et al., 2009; Pelletier, 2011). For example, the aggregate annual costs related to obesity, among full-time employees, is $73.1 billion (Finkelstein, DiBonaventura, Burgess, & Hale, 2010). The prevalence of obesity among American adults is currently 30% (Centers for Disease Control and Prevention, 2009), and it is estimated that in thirteen states the rates could exceed 60% by 2030 (Robert Wood Johnson Foundation,

2012). Though chronic diseases are the most common and costly of all health problems, they are preventable (Centers for Disease Control and Prevention, 2009).

Recent research has demonstrated that worksite wellness programs have a positive impact on modifiable health risks (Anderson, Brink, & Courtney, 1995; Anderson et al., 2000; Goetzel et al., 1998; Musich, Lu, McDonald, Champagne, & Edington, 2004), on increasing productivity (Aldana & Pronk, 2001), and on reducing health care costs (Pelletier, 2005). While employers and scholars agree that reducing costs is a goal of worksite wellness programs, there is little consensus on how best to achieve these reductions (Mattke et al., 2012). Historically, worksite wellness programs have focused on the modification of individual employee behavior (e.g., Shepard, 1981). Recently, scholars expanded the discussion to include the influence the workplace environment has on employee health behavior (e.g., Golaszewski et al., 2008). Golaszewski et al. (2008) provided a model that defined what aspects of the workplace environment might influence employee health behavior. This model, called the Organizational Health Environment, includes the work factors, structure factors, and cultural factors of the workplace environment. Additionally, Golaszewski et al. (2008) emphasize that organizational leadership and senior management define the Organizational Health Environment.

This focus on leadership is not new to the worksite wellness conversation. For over ten years, the Wellness Councils of America (WELCOA) has been emphasizing the importance of capturing CEO support as the first of seven steps to implement a worksite wellness program (Hunnicutt & Leffelman, 2006). What is new is the emerging research on the influence of the organizational environment, specifically, the cultural factors and

the influence of leadership on employee health behaviors (Della, DeJoy, Goetzel, Ozminkowski, & Wilson, 2008; Della et al., 2010; Golaszewski, Hoebbel, Crossley, Foley, & Dorn, 2008; Hoebbel, Golaszewski, Swanson, & Dorn, 2012). The present study contributes to this conversation by exploring the relationship between leadership support for health promotion and organizational health climate (often referred to as organizational health culture) in relation to employee health-related behaviors and work behaviors and attitudes.

Background

Worksite wellness programs began after World War II in the form of executive fitness plans and employee assistance programs (EAPs) (Owens, 2006). The number of corporate wellness programs grew throughout the 1970s, and research articles began to appear in the 1980s discussing physical fitness efforts at work and the effects on worker performance (e.g., McKendrick, 1982; Shepard, 1981). The literature of the 1980s and today still discusses the potential of wellness programs to reduce health care expenses, reduce absenteeism, be used to recruit and retain talent (Call, 2009); and it is still seeking to empirically demonstrate these benefits.

Workplace health promotion (WHP) programs are generally implemented to stop or reverse the rising insurance cost trends that employers are experiencing due to the increase in the prevalence of chronic disease among working adults (Mattke et al., 2012). Other WHP goals are to improve employee health, increase employee productivity, and increase employee satisfaction (Aldana et al., 2012; Merrill, Aldana, Anderson, & Vyhlidal, 2011). In order to accomplish these desired outcomes, the research literature is increasingly recommending strategies that support both individual employee behavior

change and changes to the workplace environment (work factors, structure factors, and cultural factors) (Goetzel & Pronk, 2010; Hoebbel et al., 2012). The research literature reveals two distinct intervention approaches: (a) changes in structural features of the workplace (DeJoy & Wilson, 2003; Engbers, van Poppel, Chin, & van Mechelen, 2005), and (b) changes in the cultural aspects of the workplace (Merrill, 2011). Golaszewski et al. (2008) proposed that an interdependent and overlapping relationship between work factors, structure factors, and cultural factors collectively forms an Organizational Health Environment. "It is this health environment that is thought to exert an influence on employee health behavior and subsequent health risk; however, little empirical evidence exists to support this premise" (Hoebbel et al., 2012, p. 301). It is this conversation in the literature that has led to the development of the current study to examine the relationship among employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee health-related behaviors and work behaviors and attitudes.

Statement of the Problem

Employers sponsor wellness programs to impact employee health behavior and to reduce their health care costs (U.S. Department of Health and Human Services, 2010), but to what extent do wellness programs impact employee health behaviors? Current research suggests that participation rates in worksite wellness programs tend to be low, and that generally, the healthiest employees are the participants (Linnan, Sorensen, Colditz, Klar, & Emmons, 2001; Mattke et al., 2012). There is a call for further research on the worksite environment and its influence on employee health behavior (Golaszewski et al., 2008).

One emerging area of research in workplace wellness is leadership and organizational health climate (also referred to as organizational health culture) (Della et al., 2008; Golaszewski et al., 2008). The importance of leadership has long been accepted and emphasized by workplace wellness organizations, such as the Wellness Council Of America (WELCOA), and by subject matter experts (Golaszewski et al., 2008); however, surprisingly little empirical research has been reported (Aldana et al., 2012).

Workplace wellness research has historically been grouped together with safety research and referred to as workplace health and safety (Basen-Engquist, Hudmon, Tripp, & Chamberlain, 1998; Wilson, Dejoy, Vandenberg, Richardson, & McGrath, 2004). From this literature grew an interest in the safety climate, the artifact of the safety culture created by leadership, and its impact on safety outcomes. Safety climate studies have established a relationship between leadership, safety climate, and employee safety outcomes (e.g., Clarke, 2006; Neal & Griffin, 2006). Additionally, recent research has suggested that health climate and safety climate are two different constructs (Zweber, 2012). Health climate is an emerging area of research in WHP, and a limited number of empirical research studies have been completed to date.

A call to fill the gap between science and practice in workplace wellness research has been made (Goetzel et al., 2007; Terry, Seaverson, Grossmeier, & Anderson, 2008). Researchers need to explore what theoretically should work, and in reality what is working in organizations. Until this gap is filled, scholars, practitioners, and educators will continue to advocate for and emphasize the importance of leadership in workplace wellness, without the research evidence demonstrating the relationship between

leadership support for health promotion, organizational health climate, and employee work and health behaviors. Many researchers recognize that leadership support for health promotion is an important factor in creating a supportive organizational health climate (Della et al., 2008; Golaszewski et al., 2008), and organizations have implemented health promotion programs in hopes that they will impact the rising health care costs, increase employee productivity, increase employee job satisfaction, and/or have a positive impact on employee health-related behaviors (Aldana, Merrill, Price, Hardy, & Hager, 2005; Dalton & Harris, 1991; Goetzel et al., 2004; Merrill, 2011; Ozminkowski et al., 1999; Sears, Shi, Coberley, & Pope, 2013; Wilson et al., 2004). While it seems logical that worksite health promotion programs would have such an impact, little empirical research has been done to determine if there is a connection between these variables and to define the strength and direction of the relationship among them.

Purpose Statement

The purpose of this study is to examine the relationship between employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee health-related behaviors and work behaviors and attitudes. In addition, this study seeks to explore the extent to which variance in employee health and work behaviors may be accounted for by employees' perceptions of leadership support for health promotion and by employees' perceptions of organizational health climate.

Theoretical Base

This exploratory study examines relationships among three variables (leadership support for health promotion, organizational health climate, and employee health-related behaviors and work behaviors and attitudes) based on conceptual frameworks and models found using ecological theory. Ecological theory is widely accepted and applied to health behavior research and numerous models have been applied to worksite health research (Sallis, Owen, & Fisher, 2008). Two theoretical models were essential to the development of the proposed conceptual framework: (a) Social Ecology Model for Health Promotion (Sallis et al., 2008; Stokols, 1992) and (b) the Organizational Health Environment Model (Golaszewski et al., 2008). Chapter II provides an overview of ecological theory, a discussion of the theoretical models influencing this study, as well as the conceptual framework used to guide this study.

Research Questions

To examine the identified gaps in the literature, a conceptual model of the relationship between employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee health-related behaviors and work behaviors and attitudes is proposed. Based on this model, the following research questions are explored:

RQ1. To what extent is there a relationship between employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate?

RQ2. To what extent is there a relationship between employees' perceptions of leadership support for health promotion and employee health-related behaviors and work behaviors and attitudes?

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RQ3. To what extent is there a relationship between employees' perceptions of organizational health climate and employee health-related behaviors and work behaviors and attitudes?

RQ4. To what extent do employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate explain variance in employee health-related behaviors and work behaviors and attitudes?

Method and Design

The research method used in this study is quantitative, non-experimental. Quantitative research focuses on gathering numerical data to determine how one variable is related to another (Creswell, 2009). Quantitative research designs are described as either descriptive (subjects usually measured once) or experimental (subjects measured before and after a treatment) (Labaree, 2013). This study sought to describe the relationship between employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee health-related behaviors and work behaviors and attitudes. A cross-sectional survey design (Babbie, 1990) was used. Data were collected, using a survey at one point in time from a sample, to describe some larger population at that time. This research study collected primary data from employees of four different organizations in the southeast United States. The data were then analyzed using descriptive statistics, correlation, and regression modeling to describe the strength and direction of the correlations among the variables, and to determine how much variance in employee health-related behaviors and work behaviors and attitudes was accounted for by employees' perceptions of leadership support for health promotion and by employees' perceptions of organizational health climate.

Definition of Terms

Definition of terms includes those referenced throughout the dissertation and those specific to the dependent and independent study variables.

Culture: Schein (2004) defines culture, "as a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems" (p. 17). In this study, culture was investigated through the artifacts created by leadership, which Schein (2004) described as climate.

Employee engagement: (Shuck & Wollard, 2009) defined employee engagement as "an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes" (p. 103).

Health: In this study, health is defined as an overall state of well-being. The Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference (1946) states, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p. 1).

Health-related behaviors and work behaviors and attitudes: In the model for this study employee health-related behaviors and work behaviors and attitudes were defined as: (a) retention and productivity, (b) health, and (c) participation in wellness activities.

Leadership support for health promotion: In this study, leadership support for health promotion is defined as, "the level of organizational support and management engagement in health promotion" (Della et al., 2008, p. 360).

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Organizational climate: Organizational climate has been defined as the shared perceptions held by organization members about the practices, procedures, and behaviors that are rewarded and supported in a particular setting (Reichers & Schneider, 1990).

Organizational health climate: Zweber (2012) defined organizational health climate as, "Employee perceptions of active support from upper management as well as supervisors and coworkers for the physical and psychological well-being of employees" (p. 6).

Organizational health promotion: DeJoy and Wilson (2003) state, "organizational health promotion emphasizes the dynamic interplay of individual and organizational factors and how this interaction affects the optimal use of the people resources of the organization" (p. 337).

Presenteeism: Presenteeism is defined as impaired performance while present on the job (Musich, Hook, Baaner, Spooner, & Edington, 2006).

Wellness: Harari, Waehler, and Rogers (2005) summarize that, "wellness is a construct reflecting the process of enhancing life quality by integrating and balancing one's physical, mental and spiritual well-being" (p. 93).

Assumptions

The underlying assumptions of this study were:

1. All those surveyed told the truth as they see it from their own perception.

2. Those completing the survey understood the survey questions.

3. The survey items measuring the constructs in this study were valid and reliable.

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4. Employees' perception of leadership support for health promotion were identified and understood using the Leading by Example Tool (Della et al., 2008), and organizational health climate was identified and understood using the Lifegain Health Culture Audit© (Allen, 2008).

5. Employees participating in this study were aware of and able to comment on the leadership support for health promotion and the health climate at their organization.

Significance of the Study

This study advances the scholarly literature by empirically exploring the discussed role of leadership in the worksite wellness equation (Della et al., 2010; Golaszewski et al., 2008; Hunnicutt & Leffelman, 2006). It adds new knowledge of employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and explores their contribution(s) to employee health-related behaviors and work behaviors and attitudes. It is expected that employees' perceptions of leadership support for health promotion are related to employees' perceptions of organizational health climate. It is also expected that both employees' perceptions of leadership support and employees' perceptions of organizational health climate account for some variance in employee health-related behaviors and work behaviors and attitudes. The findings from this study contribute new knowledge to the existing research literature, and may also be used by worksite wellness and human resource practitioners when designing, implementing, and evaluating organizational health promotion programs.

Summary

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This chapter provides an overview of the context within which this study was conducted, including the problem statement, the study purpose, historical background, and the theoretical basis for the development of the conceptual framework that was used to evaluate the relationship among the variables of interest. It also details the specific research questions and provides a broad description of the method used to answer the identified research questions.   Definitions of technical terminology are provided as well as an identification of the assumptions, delimitations and limitations of the study. The chapter concludes with the significance of the study. A review of the literature can be found in Chapter II.

CHAPTER II

LITERATURE REVIEW

The purpose of this study was to investigate the relationship among employees'
perception of leadership support for health promotion and employees' perceptions of
organizational health climate, and employee health-related behaviors and work behaviors
and attitudes. In this chapter, a critical literature review is provided that supports the
need for investigating the relationship among the variables in this study.

Practitioners and scholars have acknowledged the critical role of employee
wellness in important organizational outcomes (Goetzel et al., 2004; Kuoppala,
Lamminpaa, & Husman, 2008; Sears et al., 2013), and the number of employers offering
wellness programs continues to grow (Mattke et al., 2012). However, empirical research
on the role of leadership support for health promotion and organizational health climate
in contributing to wellness program success is limited (Aldana et al., 2012; Wilson et al.,
2004). Empirical studies on employee health behavior in the workplace have been
focused primarily on employee participation in programming and interventions (Gold,
Anderson, & Serxner, 2000; Hughes et al., 2011; LeCheminant & Merrill, 2012; Menon,
Paulet, & Thomas III, 2012; Merrill et al., 2011; Merrill, Bowden, & Aldana, 2010;
Ozminkowski et al., 2000; Tucker, Cook, Nokes, & Adams, 2008; van Wier et al., 2009).
While several researchers have posited that leadership and organizational culture are

integral variables predicting employee health behaviors (Aldana et al., 2012; Golaszewski et al., 2008), this literature review could locate only two studies that investigated these variables empirically (DeJoy et al., 2009; DeJoy et al., 2012).

This chapter begins with discussion of the rigorous literature review selection process and the theoretical background of this research, and then the conceptual framework that emerges from the Ecological Model is presented. The chapter concludes by (a), discussing the concepts and critiquing the literature that was relevant to the variables in the proposed framework, and (b) describing how the proposed framework ultimately informed the research questions and methodology of this exploratory project.

Literature Review Selection Process

The key words used for this literature review process were "leadership support," "health climate," "corporate wellness," and "behavior or employee behavior." The selection criteria used to funnel through the vast array of literature found were: English language, US-based research studies, non-hospital settings, and employee focused (not patient or nurse). It was determined that the studies most relevant to this research also included measurements of employee perceptions. The review process began with the ProQuest Dissertations and Theses Database, which produced 3165 dissertations with 38 written between 1975 and 2000. Of these Dissertations and Theses, three were selected for inclusion in this study. MEDLINE (Web of Knowledge) produced 151 hits, of which ten articles were determined to be relevant to the study. There were four main journals—*Journal of Occupational and Environmental Medicine, American Journal of Health Promotion, American Journal of Preventive Medicine,* and *American Journal of Health*

Studies—referenced in these findings, so each journal was searched independently for additional articles, which produced an additional six articles.

In addition, the following experts were consulted to determine all relevant articles were included in the literature review: Mr. Hank Orme, prior CEO of Lincoln Industries and founder of Performance ph; Ms. Nikki Hudsmith, prior researcher with Gallup who consulted with Lincoln Industries and now works with Performance ph; Drs. Reischl and Ribisl, developers of the Worksite Health Climate Scales; Ms. Zweber, developer of the Multi-Faceted Organizational Health Climate Assessment; Dr. Mark Wilson for measures of employee health behavior used in a prior study; Drs. Della and DeJoy, developers of the Leading By Example tool. These conversations produced an additional five articles.

These 24 articles laid the foundation for this study. In order to connect the two fields of public health and organizational behavior, a review of the human resource development literature was included to expand the perspective of job behaviors and attitudes referenced in the literature. An additional, 150 articles were reviewed and 26 were included in this summary.

Theoretical Background of Established Models

A theoretical background is essential in preparing a research study using empirical methods because (a) it makes generalizations about observations and consists of an interrelated, coherent set of ideas and models, (b) it is a structure that can hold or support a theory of a research work, (c) it presents the theoretical model(s) explaining why the problem under study exists, (d) it helps the researcher see clearly the variables of the study, and (e) it sometimes provides a general framework for data analysis (Miles & Huberman, 1994). Two theoretical models were essential in this research study that stem

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from the Ecological Model: Social Ecology Model for Health Promotion and the

Organizational Health Environment Model.

The Ecological Model

Worksite health promotion began with interventions focused on individual

behavior change from an educational or cognitive perspective (e.g., Everly & Feldman,

1985; Parkinson, 1982). However, this narrow focus on the individual left many of the

influences on behavior out of the intervention strategies, so scholars argued for a broader

environmental perspective (Stokols, Allen, & Bellingham, 1996). In response, the

ecological model has been widely accepted and applied to health behavior (Sallis et al.,

2008). This acceptance is demonstrated by its use in authoritative documents which

guide public health programs nationally and internationally: *Healthy People 2020* (U.S.

Department of Health and Human Services, 2010), Institute of Medicine (IOM) reports

on health behavior (Pellmar, Brandt Jr, & Baird, 2002), and the World Health

Organization's (WHO) strategy for diet, physical activity, and obesity (Waxman, 2004).

There are four core principles of ecological models of health behavior: (a) there are

multiple levels of influence on specific health behaviors (i.e., intrapersonal, interpersonal,

organizational, and community), (b) influences on behaviors interact across levels, (c)

interventions must be behavior-specific, and (d) multi-level interventions are necessary to

effect change (Sallis et al., 2008).

Ecological models provide a theoretical framework through which research can be

done to better understand how people interact with their environments. While the focus

on the environment is widely accepted among workplace health promotion scholars, there

is still much discussion of and little consensus on which factors in the workplace most

influence health behaviors among employees (Aldana et al., 2012; DeJoy & Wilson, 2003; Golaszewski et al., 2008). The one consensus these scholars have reached is the need for empirical research. This study contributes to the empirical scholarship by exploring the influence of leadership and climate using the ecological model as the guiding theory to better understand how employees perceive their environment and how this relates to their health-related behaviors and work behaviors and attitudes.

        Social ecology model for health promotion. Social ecology comes from biological science and refers to behavior change theories that focus on strategies that consider the interrelationships between people and their environments (Golaszewski et al., 2008; Sallis et al., 2008; Stokols, 1992). As mentioned above, the narrow focus on the individual did not provide a sufficient account for the many influences on behavior, so an ecological model emerged that considered the environment. Ecological models provide the connection between people and their environments and numerous models have evolved which focus on specific behaviors and circumstances. One example is the Social Ecology Model for Health Promotion (Stokols, 1992; Stokols, Grzywacz, McMahan, & Phillips, 2003). Social ecology theory has influenced many health promotion researchers and is evidenced in the proposed Organizational Health Environment Model (Golaszewski et al., 2008) discussed below.

Organizational health environment model. Golaszewski et al. (2008) described

the Organizational Health Environment Model, which integrates an environmentally-

based intervention within a comprehensive health management effort. A figure of the

model is provided below (Figure 1) and a discussion of the components follows.

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┌─────────────────────────┐              ┌──────────────────────────┐
│ Organizational Leadership│              │ External Business         │
│ Senior Management        │ ◄─────────── │ Environment               │
└─────────────────────────┘              │   Business climate        │
              │                           │   Government regulation   │
              ▼                           │   Business trends         │
┌───────────────────────────────────┐    │   Litigation threat       │
│ The Organizational Health Environment │  │   Board of Directors     │
│                                     │    │   Research results        │
│ Work Factors                        │    └──────────────────────────┘
│ (size, industry type, management style, employee control,
│ physical comfort, involvement, job design, job security)
│
│ Structure Factors        Cultural Factors
│   facilities               cultural norms
│   awareness                cultural values
│   services      ◄════►     cultural touch points       ┌──────────────────┐
│   policies                 peer supports          ◄─── │ In/out Migration  │
│   benefits plan            cultural climate             └──────────────────┘
│   promotions               rites, symbols & rituals
│   administrative structure
└───────────────────────────────────┘
              │
              ▼
┌───────────────────────────┐        ┌──────────────────────────────┐
│ The Employee              │        │ Exogenous Factors             │
│ Predisposing Factors      │        │ External social events        │
│ (knowledge, beliefs, values,│      │ (community, household);       │
│ skills, attitudes)        │ ◄───── │ Other institutions (health care,
│ Health Behaviors          │        │ churches, government, schools,│
│                           │        │ etc.); mass media.            │
│ Health Risk Factors       │        └──────────────────────────────┘
└───────────────────────────┘
              │
              ▼
┌───────────────────────────┐
│ Employee Health/Work Performance │
└───────────────────────────┘
              │
              ▼
┌───────────────────────────────────┐
│ Employee Health Cost Variables    │
│ Health insurance        Absences  │
│ Disability                        │
│                                   │
│ Employee Productivity             │
│ Presenteeism            Absences  │
└───────────────────────────────────┘
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Figure 1. Organizational Health Environment Model (Golaszewski et al., 2008).

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As shown in Figure 1, organizational leadership and senior management largely define the organizational health environment through their management style, allocation of resources, and influence on the organizational policies, procedures, and culture. Leadership decisions are influenced by the external business environment, employee health cost variables, and employee productivity, which in turn impact the organizational health environment.

The organizational health environment is comprised of work, structure, and cultural factors. The work factors include organizational size, industry type, management style, employee control, physical comfort, involvement, job design, and job security. The structure factors refer to the tangible or observable features of any health management initiative and include facilities, awareness, services, policies, the benefits plan, promotions, and administrative structure. The cultural factors include cultural norms, cultural values, cultural touch points, peer supports, cultural climate, and rites, symbols, and rituals. The model shows an interdependent relationship between the structural and cultural factors, and Golaszewski et al. (2008) indicate that the work, structural and cultural factors all overlap significantly. The model acknowledges the impact of the hiring and loss of employees on the organizational health environment, which is consistent with the Social Ecology Model for Health Promotion.

The organizational health environment then influences the employee, who is also influenced by health behaviors, health risk factors and predisposing factors, such as knowledge, beliefs, values, skills, and attitudes. Exogenous factors such as the external social environment (community, household); other institutions (health care, churches,

government, schools, etc.); and the mass media also influence the employee. The employee factors then impact the employee's health status and work performance.

The Organizational Health Environment Model (Golaszewski et al., 2008) was based on: (a) financial need to keep low risk employees at low risk for health issues, thereby maintaining costs; (b) past research, which indicates environmental factors impact employee health and productivity; and (c) social ecology theory, which integrates the many factors that define and influence the organizational health environment. The authors suggest this model will represent the next generation of health management programs and that the employer will use it to understand what drives employee health and what is manageable.

Business owners, managers, and wellness practitioners may agree with this model in theory, as it is logical that leadership influences the health environment; however, this relationship has not been demonstrated through research in the context of the wellness literature. At this time, most business leaders are focused on structural factors (i.e., benefits, services, and facilities) with little attention being paid to work or cultural factors. This study will seek to establish empirically the relationship between leadership support for health promotion, organizational health climate, and employee health and work behaviors, thereby adding evidence and information about this relationship to the scholarly discussion on organizational health promotion.

Worksite health promotion began with a focus on individual behavior change and has broadened its scope by embracing ecological models. The ecological model has been widely accepted and applied to health behavior among scholars and practitioners. Sallis et al. (2008) observed that, "a central conclusion of ecological models is it usually takes the

combination of *both* individual-level and environmental/policy-level interventions to achieve substantial changes in health behaviors" (p. 467). It will take substantial changes in employee health behaviors to impact our current national health care crisis. Therefore, it is essential to have a conceptual framework that includes individual and organizational influences on employee health behavior.

<div align="center">**Conceptual Framework for this Study**</div>

Individual-level and environmental-level influences on employee work performance and health outcomes are accounted for in the proposed Organizational Health Environment Model (Golaszewski et al., 2008), which is based on social ecology theory. The Social Ecology Model for Health Promotion focuses on work and health behaviors, the dependent variables of interest in this study. Additionally, the Social Ecology Model can be applied to the workplace, the setting for this study. The assumptions of the Social Ecology Model for Health Promotion and the Organizational Health Environment Model influenced the framework developed to guide this research. A figure of the framework is provided below (Figure 2).
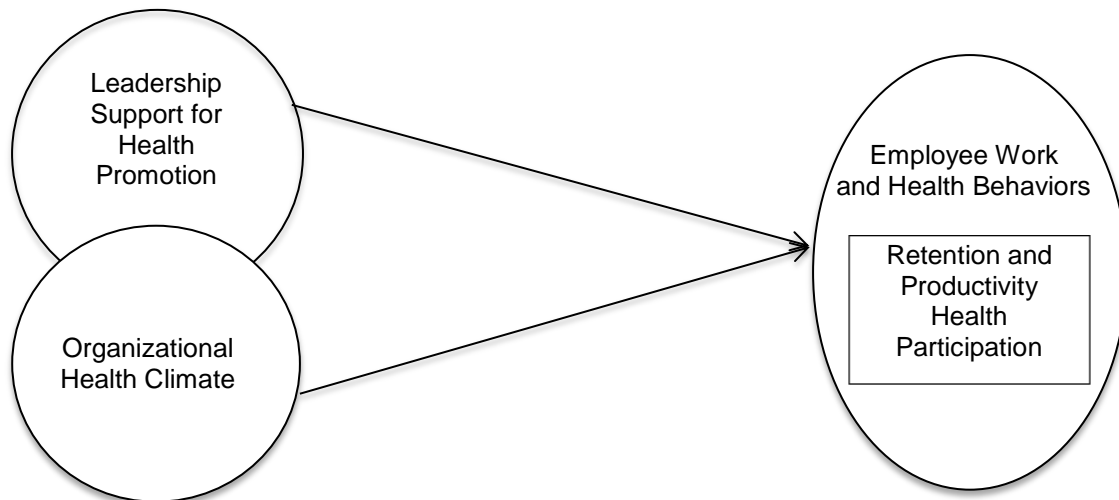
Figure 2.   Proposed conceptual framework for the present study.

Miles and Huberman (1994) focus upon the conceptual framework as a system of concepts, assumptions, expectations, beliefs, and theories that support and inform one's research. In addition, they discuss the conceptual framework as a visual or written product that explains either graphically or in narrative form, the main things to be studied (i.e., the key factors, concepts or variables), and the presumed relationships among them. The proposed conceptual framework for this study has three main variables of interest: (a) employee perceptions of leadership support for health promotion, (b) employee perceptions of organizational health climate, and (c) employee health and work behaviors (retention and productivity, health, and participation in wellness activities). According to social ecology theory, employee behavior is influenced by: (a) the physical environment, which is the workplace; (b) the social environment, which is leadership and climate in this model; and (c) the personal or individual attributes.

Leadership Support for Health Promotion

There is discussion in the scholarly literature of the foundational importance of leadership support for worksite health promotion (DeJoy et al., 2009; DeJoy et al., 2012; Della et al., 2008; Merrill, 2011). It makes logical sense that leadership support must be present in order for programming to follow, as leadership allocates the budget, defines the policies, and determines the focus of the organization through its vision, mission, strategic plan, and goals (DeJoy et al., 2009). However, leadership support for worksite health promotion is not often operationalized in the research literature. There have been some research studies on the relationship between leadership support and participation in wellness activities (Crump, Earp, Kozma, & Hertz-Picciotto, 1996; Grossmeier, 2013; Taitel, Haufle, Heck, Loeppke, & Fetterolf, 2008; Terry et al., 2008). Additionally, there

have been a few research studies on the relationship between leadership support and employee behavior in the organizational health promotion literature. A description of the research found follows.

Goetzel et al. (2007) conducted a benchmarking study to identify the factors that contribute to successful employer health and productivity management programs. The researchers defined promising practice criteria through a literature review, and discussions with subject matter experts.   Then the researchers compiled a list of 99 organizations (from expert recommendation, journal review, and best practice award winners) that met the criteria and invited them to participate in a survey ($N = 39$). The survey data were then scored to identify those organizations that were exhibiting the promising practices. Finally, the researchers arranged site visits to nine of the high scoring organizations in order to obtain an employer perspective. The promising practices identified were: (a) include features and incentives that align with organizational operations, (b) operate simultaneously at multiple levels, (c) target several health care issues, (d) design programs specific to population needs, (e) attain high participation in wellness activities, (f) conduct rigorous program evaluation, and (g) communicate successful outcomes with key stakeholders. These findings reinforce previous research on best practices in workplace health promotion.

Another study looking at organizations that incorporate best practices was conducted by Terry et al. (2008). Worksite health management data collected by StayWell Health Management were analyzed to find which health promotion system led to the highest levels of employee engagement and health risk reduction (Terry et al., 2008). 22 organizations were part of this study representing 767,640 eligible employees,

spouses, and retirees. The authors found organizations where a comprehensive program was implemented, referred to as "best-practice organizations," had better program outcomes. In this study, comprehensive programs included comprehensive program design, management support, integrated incentives, comprehensive communications, dedicated onsite staff, multiple program modalities, health awareness programs, biometric health screenings, and vendor integration. The authors found organizations with comprehensive programs achieved higher levels of participation in both health assessment and health coaching programs (Terry et al., 2008). Health assessment participation rates were 1.44 times higher (statistically significant 68% vs. 47%, respectively; $p = 0.043$), and participation in health coaching programs was 1.41 times higher (not statistically significant). Best-practice organizations achieved superior health risk reduction results (2.35 times as much reduction at the population level).

Ths evaluation suggests a relationship between leadership support and employee behavior, as comprehensive programs had management support defined as, "senior-level and mid-level management support population health management initiatives as evidenced by documented communications, infrastructural incentives, and health-focused policies" (Terry et al., 2008, p. 636). The suggestion of a relationship in one retrospective evaluation is not sufficient evidence of its existence.

Preliminary evidence supporting a relationship between leadership support and employee behavior was provided in the findings of Crump et al. (1996). The study was focused on employee ($N = 3,388$) participation in ten federal agencies worksite health promotion and disease prevention programs; however, their findings indicate, "the more extensive the personal commitment required to participate, the more important we found

management support, social environment, and organization resources to be" (p. 217). If

an activity were one-time (i.e., completing a health risk assessment) it was not associated

with management, coworker, or organization support. If an activity were ongoing (i.e.,

health-related seminars or fitness activities) there was a relationship. Employees who

were male, white, and had upper level positions related management support for the

program to participation. This was the one of the few research studies found to

empirically demonstrate a relationship between leadership support and employee

behavior.

Like many scholars, Merrill (2011) described the importance of leadership

support and culture; unfortunately, neither variable were operationalized in the

longitudinal evaluation of participation in wellness activities and effectiveness of a

worksite wellness program in a small business setting. The study took place at Lincoln

Industries over three years 2007 ($N = 440$), 2008 ($N = 369$), and 2009 ($N = 279$). Lincoln

Industries leadership created and developed a culture of health and wellness in their

workforce. They led by example and outwardly associated a healthy workforce with the

success of the company as demonstrated in a quote from the Merrill (2011) article:

> Wellness is integrated into the business strategy of the company [Lincoln
> Industries]. It is one of Lincoln's corporate belief statements, a significant
> component of leadership development, integrated into daily company operations,
> and is part of both supervisor and employee performance evaluation systems (p.
> 127).

The study found all Lincoln Industries employees participated in at least some level of

wellness programming, and significant improvements in body fat, blood pressure, and

flexibility were observed across time with the largest improvements in health risk among

older employees and those with the highest baseline values. This study strongly suggests

a relationship between leadership support, organizational health climate, and employee behavior and health outcomes; however, it did not operationalize leadership support or organizational health climate.

Leadership support was operationalized by Della et al. (2008). The authors updated and expanded the Leading by Example (LBE) instrument, originally developed by the Partnership for Prevention, as a means of assessing management support for worksite health promotion as part of a grant from the National Heart, Lung and Blood Institute (NHLBI). The NHLBI funded seven research centers to examine workplace interventions that used environmental approaches, or individual and environmental approaches, to prevent or reduce obesity in adults. A complete description of the psychometric analysis of the LBE instrument can be found in Della et al. (2008).

As an introduction to the measurement of management support, DeJoy et al. (2009) explained that measuring leadership support overlaps with the concept of organizational climate. Organizational climate has been defined as the shared perceptions held by organization members about the practices, procedures, and behaviors that are rewarded and supported in a particular setting (Reichers & Schneider, 1990). A detailed discussion of organizational health climate follows this section, but it is important to note here that employee perceptions of management support play a key role in the formation of employee climate perceptions. This relationship has been demonstrated in the safety climate literature, which has found that employee perceptions of management support are often the largest component of safety climate (Neal & Griffin, 2006). This overlap between leadership support and organizational health climate is

depicted in the conceptual framework above (see Figure 2). In the review of the

literature, four articles were found that used the LBE in their research.

As part of the NHLBI funding four articles were generated. Each pertaining to

the study conducted at 12 worksites of The Dow Chemical Company (DeJoy et al., 2009;

DeJoy et al., 2012; Della et al., 2008; Della et al., 2010). A quasi-experimental cohort

study was conducted at nine treatment sites ($n = 8,013$) and three control sites ($n =$

2,268). The two-year intervention was developed using a social ecology theory. The

three control sites received the company's standard health promotion programming,

which employed health risk appraisal tools and some individually focused health

education and behavior change activities (Della et al., 2010). Two levels of treatment

were assigned (moderate- and high-intensity) to improve environmental and

organizational supports for healthy eating and physical activity. The moderate intensity

included environmental interventions (e.g., healthy vending machines). The high

intensity added components designed to increase the perceived management support for

health promotion (e.g., formal communication from management about the health

improvement program, health-related goal setting, recognition and rewards for

workgroups and leaders who promoted and encouraged participation in wellness

activities) (DeJoy et al., 2009).

The LBE instrument was developed as a self-report instrument that could be used

as an overall global assessment of management support for health promotion, and to

assess and monitor change over time through repeated administrations (Della et al.,

2008). In 2005, the LBE questionnaire was distributed to: site leadership, health services

staff, and members of the employee advisory committees ($n = 135$) at 11 of the sites (the

12th site was used for the pilot test). A second sample was collected in 2006 ($N = 178$) and the factor structure was confirmed using confirmatory factor analysis (Della et al., 2008). The LBE instrument was found to have four subscales: (a) business alignment with health promotion objectives ($\alpha = .80$), (b) awareness of link between health and productivity ($\alpha = .72$), (c) worksite support for health promotion ($\alpha = .65$), and (d) leadership support for health promotion ($\alpha = .76$) (Della et al., 2008).

As part of the ongoing research to see if change occurred over time, the LBE instrument was administered at the 12 Dow sites in 2005 ($n = 125$), 2006 ($n = 114$), and 2007 ($n = 106$) to the same three groups: site leadership, health services staff, and members of the cross-discipline team (Della et al., 2010). The data from 2005 and 2006 were previously used to validate the instrument. This repeated-measures application was analyzed using a two-way factorial general linear model, regressing data collection year and intervention intensity on each of the four main LBE factors. The researchers found statistically significant changes from baseline to one year later for the four factors ($p = .000$) (Della et al., 2010). No significant changes were found between 2006 and 2007. The researchers explained that the relatively small sample size and the lack of analytical power might have been the cause of the nonsignificant interactions despite the general pattern of mean differences.

The LBE instrument is also included in a process evaluation completed on the same study at Dow from 2005 to 2008 (DeJoy et al., 2012). The process evaluation set out to test the fidelity of the intervention, to monitor anticipated shifts in the health climate, and to detect intensity-related differences between treatment conditions. There were a total of 11 interventions that were assigned a fidelity rating of *high*, *moderate*, or

low. There were seven intervention components that all the treatment sites (moderate- and intense) received related to: (a) vending machine offerings (*low*), (b) cafeteria offerings (*high*), (c) catering policies (*moderate*), (d) walking paths (*high*), (e) healthy culture focal points (*moderate*), (f) targeted messages (*moderate*), and (g) employee rewards and recognition (*high*); and four that only intense sites received: (a) organizational goal setting (*moderate*), (b) leadership accountability (*high*), (c) leadership training (*low*), (d) and leadership rewards and recognition (*high*) (DeJoy et al., 2012). There is no clear pattern that allows for a conclusion about which intervention had more fidelity. It is interesting that several interventions that seemed straightforward were found to be difficult to implement with high fidelity (e.g., vending machine offerings, and targeted messages) due to multiple outside contractors and the size of the site (multiple buildings with varying levels of access) (DeJoy et al., 2012).

The perceptions of health climate were evaluated using three data sources: the LBE questionnaire (specifically, the worksite support and leadership support), the participant questionnaire, and the employee survey (DeJoy et al., 2012). The LBE was administered to the same three groups: leadership, health service staff, and the employee advisory committee. The researchers found improved scores over baseline, but intense sites did not rate their leadership as significantly more supportive of health promotion than the moderate intervention sites. Comparing data from 2006 and 2007 intense sites show some declines in scores, which was more pronounced for leadership support compared with worksite support (DeJoy et al., 2012). Employees who chose to participate in the study's main data collection activities completed participant questionnaires (approximately 30-50% of employees at each site). The questionnaires

produced similar results. The employee survey was administered to a random sample of employees in 2007 ($n = 554$) and 2008 ($n = 428$) and sought to reach employees who were exposed to the interventions, but who may not have chosen to participate (DeJoy et al., 2012). Again, the results showed similar climate levels for both treatment conditions. Taken together, the three data sources demonstrated that health climate improved compared to baseline values and was moderately positive at all nine sites throughout the study, and that it did not vary by treatment level.

The last area to be evaluated was intensity related effects and two data sources were used for the evaluation: the Environmental Assessment Tool (EAT) scores and the employee survey. EAT was developed specifically for this research project to collect data, through observation by site staff and independent observers who toured the site, about environmental supports for physical activity, nutrition and weight management, and organizational characteristics and support (DeJoy et al., 2012). Total scores for all but one site, which had already exceeded the scores reached by most sites during the study, increased over baseline. Overall, the EAT showed improvements in workplace supports for weight management and significant differences by treatment level. The employee survey was used to evaluate employee awareness levels across intervention sites, and the results were inconclusive of a difference.

DeJoy et al. (2012) concluded that the absence of treatment effects for the climate (moderate or intense) measures indicated that the intended impact of the intense interventions was not fully realized. The researchers offered some possible explanations that include: (a) health-related goals did not receive the same level of priority or effort as other goals (e.g., production output), (b) leader training did not focus on direct activity

and involvement strategies for managers, and (c) competing priorities distracted leaders (DeJoy et al., 2012). The intervention for the study was two years, and in the second year there was considerable leader turnover, and poor economic conditions.

The last article on the same study at Dow Chemical that included the LBE was described by DeJoy et al. (2009). In addition, a second research study conducted at Home Depot was also reported in the same article. These two longitudinal studies evaluated management support for health promotion and employee health-related behaviors and outcomes.

The Dow intervention was described as a worksite weight management trial by DeJoy et al. (2009). Specifically for this research project, the LBE and EAT were developed to measure different aspects of management support, and were administered at baseline, year one of intervention, year two of intervention, and post-intervention. Biometric and other outcomes were measured at baseline, mid-intervention, and post-intervention. The LBE factor scores demonstrated changes over time across intervention levels: business alignment with health objectives factor ($p = .010$), awareness of health economics and productivity factor ($p = .060$), and worksite support for health promotion factor ($p = .085$). Additionally, LBE factor scores were also related to weight loss, with a 6.4% increase in the prevalence of employees who lost or maintained their weight per point increase in the total LBE score ($p = .060$) (DeJoy et al., 2009). The EAT scores for nutrition and weight management, organizational support and total score demonstrated significantly greater changes at the intervention sites, from baseline to intervention year two compared to control sites. Changes in the total EAT scores were also related to

weight loss, with a 0.4% increase in the prevalence of employees who lost weight per point increase in the total EAT score ($p = .013$) (DeJoy et al., 2009).

A group-randomized 12-week intervention at 16 Home Depot worksites ($N = 1,442$) was designed using social ecology theory to increase leisure-time physical activity (DeJoy et al., 2009). The treatment group implemented organizational action, which included: (a) senior management endorsement, (b) formation of a steering committee comprised of worker-management to plan programming, (c) group and organizational goal setting, and (d) environmental supports and prompts that advertised and facilitated physical activity. Participant perceptions of management support for physical activity was assessed using a five-item scale derived from the physical activity portion of the Heart Check (Golaszewski & Fisher, 2002). Employee involvement was measured using a four-item scale adapted from the high involvement work process literature (Vandenberg, Richardson, & Eastman, 1999). Physical activity was assessed using the International Physical Activity Questionnaire (IPAQ) (Lawler, 1992). Data were collected at baseline, mid-point, and at the end of the intervention period. Change in employee perceptions of management support, employee involvement, and physical activity were analyzed using latent growth modeling (LGM) and latent transition analysis. There were linear increases in management support ($p < .05$) and employee involvement ($p < .001$) for the intervention group, but a decrease in management support ($p < .05$) and no change in employee involvement in the control group (DeJoy et al., 2009). Management support and employee involvement and management support and physical activity were significantly correlated across all three data collection points. Employee involvement and physical activity were only significantly correlated at

baseline. Participants in the intervention had greater increases in moderate and vigorous physical activity and walking compared to the participants in the health education control condition (DeJoy et al., 2009).

From these two intervention studies the researchers suggested that interventions designed to increase management support result in changes in employee perceptions of support, as well as actual changes in the environments consistent with management support. These study results also provide initial evidence that increased levels of management support can contribute to beneficial changes in employee health-related behaviors and outcomes (DeJoy et al., 2009). Based on the findings of these research studies, the preliminary evidence, and the strong suggestion that a relationship exists between leadership support for worksite health promotion, organizational health climate, and employee behaviors, this hypothesis is investigated in the present study:

Hypothesis 1: Leadership support is positively associated with organizational health climate and employee health behaviors.

Organizational Health Climate

In an effort to further the research, definition, and understanding of organizational climate Schneider (1975) explained that in a work environment people form climate perceptions to make order, and that the climate perceptions serve as a barometer against which behavior may be judged as appropriate for maintaining balance. Field and Abelson (1982) defined an organization's climate as, "an abstract perception of the individual and may occur at an organization, group and/or individual level" (p. 182). Moran and Volkwein (1992) further clarified the definition by including culture, and stated organizational climate is, "created by a group of interacting individuals who share

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a common, abstract frame of reference, i.e., the organization's culture, as they come to terms with situational contingencies, i.e., the demands imposed by organizational conditions (p. 35)." Historically, organizational culture and organizational climate are researched as two separate constructs; however, Denison (1996) points out what each construct seeks to measure is similar. For the purpose of this study, the term organizational climate was chosen to describe the shared perceptions held by organization members about the practices, procedures, and behaviors that are rewarded and supported in a particular setting (Reichers & Schneider, 1990). Climate can be looked at broadly or in relation to a specific organizational aspect (a.k.a., facet-specific), such as organizational health climate (Basen-Engquist et al., 1998; Ribisl & Reischl, 1993; Wilson et al., 2004; Zweber, 2012).

The organizational health promotion literature references many things which might be called organizational health climate: culture (Crimmins & Halberg, 2009; Golaszewski et al., 2008; Hoebbel et al., 2012; Merrill, 2011; Seaverson, Grossmeier, Miller, & Anderson, 2009), management, organizational, or senior leadership support (Crump et al., 1996; Della et al., 2008; Golaszewski & Fisher, 2002; Grossmeier, 2013; Taitel et al., 2008; Terry et al., 2008), communications (Dalton & Harris, 1991; Goetzel et al., 2007; Grossmeier, 2013; Seaverson et al., 2009; Taitel et al., 2008; Terry et al., 2008; Wilhide, Hayes, & Farah, 2008), supportive environment (Crump et al., 1996; Dalton & Harris, 1991; Grossmeier, 2013; HERO, 2012; Hoebbel et al., 2012; Ribisl & Reischl, 1993; Seaverson et al., 2009; Taitel et al., 2008; Terry et al., 2008), and health climate (Basen-Engquist et al., 1998; Ribisl & Reischl, 1993; Zweber, 2012). A review of the literature relating to organizational health climate produced very few studies

wherein organizational health climate was operationalized, and even fewer where employee work and health outcomes were included.

The workplace wellness literature uses climate and culture interchangeably; however, for the purpose of this research study the term climate will be used, as a quantitative survey will be used to measure it (Denison, 1996; Schein, 2004). Aldana et al. (2012) identified four measures of climate: one measure of organizational health culture founded on a culture change framework called the Lifegain Health Culture Audit©, and three others focused on climate. In total, five measures were found for organizational health climate.

The measure of organizational health culture is called the Lifegain Health Culture Audit© (Lifegain) (Allen, 2008; Allen & Kraft, 1982). It suggests the behavioral choices an employee makes are influenced by five organizational dimensions: norms, touch points, peer support, work climate, and shared values. Table 1 provides Golaszewski et al. (2008) operational definitions of the organizational health-culture construct (p.118):

Table 1

Operational Definitions of the Organizational Health-Culture Construct*

Construct	Definition
Health Culture	A socially and organizationally-constructed set of core attributes reflecting the prevailing values, underlying assumptions, expectations and definitions that members of a work organization collectively maintain; and effect the way they think, feel, and behave related to matters of personal and group health.
Components of Health Culture	
Norms	The social boundaries that define the expected and accepted ways of behaving with respect to health issues.
Values	The collective beliefs about what health-related issues are important.

Social Support	Co-worker rendering of emotional, appraisal, informational, and instrumental resources to another regarding a personal health matter or initiative.
Cultural Touch Points (Organizational Support)	The system-wide provision of informal and formal structures, services, policies and procedures that influence the organizational culture in matters of health.
Organizational Climate	A set of temporary employee attitudes, feelings and perceptions that are influenced by workplace social and structural characteristics; and serve as a catalyst to individual health behavior change.

*Note. Adapted from the writings of Allen (2002), Basen-Engquist and colleagues (1998), Cameron (2008), and Ribisl and Reischl (1993).

Golaszewski et al. (2008) examined the reliability and validity of Lifegain© using data from 55 western New York companies ($n = 2{,}613$), as no published information was available. The study was part of the ongoing Western New York Wellness Works (WNYWW) project. WNYWW was a two-year, $1 million grant-making partnership between The University at Buffalo School of Public Health and Health Professionals and the WNYWW Community Advisory Board, and was funded by the New York State Department of Health. The researchers collected individual health risk appraisals (HRA); individual perceptions of organizational health culture using Lifegain©; the level of support for employee heart health using Heart Check, an instrument completed via an interview with organizational leadership, and health cost data. Lifegain© was found to be a reliable measure ($\alpha = .93$). Construct validity was supported through confirmatory factor analysis which produced a four factor solution which accounted for 65% of the total variance, and two additional items that had strong correlation to the total Lifegain© score, but did not load on any of the four factors. A six factor solution was developed: (a) exercise and diet norms, (b) general health norms, (c) values, (d) supervisor modeling,

(e) touch points, and (f) climate. Additionally, the researchers found Lifegain© to have criterion validity through organizational level comparison with the Heart Check.

Lifegain© was used in two research studies (Hoebbel et al., 2012; Isaak, 2010). As part of the same WNYWW project, competitive funding was provided (up to $50,000) to 13 organizations, consisting of 21 worksites, where 2-year self-directed worksite wellness programs were implemented. An examination of the relationship between structural features of the workplace and the perceived organizational health culture were evaluated using Heart Check and Lifegain©, respectively (Hoebbel et al., 2012). Baseline data were collected from 2,467 employees (20% response rate) and evaluated for associations between structural features and cultural perceptions. The unit of analysis in this study was the worksite ($n = 21$). Pearson correlation was used to examine cross-sectional relationships between worksite-level Health Check scores (on administrative structure, communication, environmental structure, health services, organizational foundations, and workplace policy) and mean individual-level total Lifegain scores. When adjusted for age and gender, significant positive correlations were found for all Heart Check factors, except organizational foundations (Hoebbel et al., 2012). Heart Check environmental structure and communication had the strongest independent correlation with Lifegain© total mean scores ($r = .55$ and $r = .72$, respectively; $p < .01$), so they were regressed to predict the total Lifegain© score. A significant age- and gender-adjusted regression model of Heart Check environmental structure and communication was found to be predictive of the total Lifegain© score ($F[4,16] = 9.08$; $p = .001$; $R^2 = .69$). Based on the findings, Hoebbel et al. (2012) concluded that making

changes to the worksite environment was strongly and positively related to employee

perceptions of the worksite health culture.

Another study looked at the effect of employee health, worker limitation, and

health culture on job productivity among North Carolina state government employees (n

= 657) at multiple sites was evaluated by Isaak (2010). A significant negative correlation

between work limitation and productivity loss was found. Work limitation and

organizational culture were found to have a low correlation (r = .09), meaning they were

two separate constructs. After controlling for work limitation, health culture did not

predict productivity loss in this study. In a regression analysis, health culture explained

0.5% of the variance in productivity loss, after controlling for work limitation. A

significant positive relationship was found between departmental wellness support and

health culture (r = .63, R^2 = .402, F(1, 500) = 335.47, p < .001) (Isaak, 2010). These

findings suggest that in this data set, organizational health culture was not directly

influencing productivity. However, in departments where the employees perceived

support for wellness, their perceptions of the organizational health culture increased.

There are three other measures of climate identified by Aldana et al. (2012): (a)

the Worksite Health Climate Scales (Ribisl & Reischl, 1993), (b) Worksite Health and

Safety Climate Scale (Basen-Engquist et al., 1998), and the (c) "Culture of Health"

(Crimmins & Halberg, 2009). The Worksite Health Climate Scales (WHCS) was

developed and administered to employees (n = 241) at a newspaper company. The

results were evaluated and the survey instrument was updated based on research findings

and then used in a study at seven small worksites (n = 203) to determine the influence of

climate (organizational support, interpersonal support, and health norms) on employee

health outcomes (physical symptoms, smoking behavior, exercise habits, nutrition habits, job stress, and general job satisfaction) (Ribisl & Reischl, 1993). The relationship between health climate and the demographic variables were evaluated using MANOVAs, and found a significant main effect for sex (Pillais $V = .21$; approximate $F (12, 167) = 3.80$, $p < .001$; $eta^2 = .21$). Men reported greater flexibility in their work schedule and greater support from their supervisor. Women reported higher amounts of support from co-workers for maintaining healthy behaviors, and generally rated health norms more positively. Men reported working significantly more hours per week (48.5) compared to women (39.8) ($t = 6.02$, $df = 195$, $p < .001$) (Ribisl & Reischl, 1993). Those who worked less hours rated their worksites as health norms more positively, so there is some question about this rating being related to gender or to hours worked. Additionally, the differences in health climate perceptions between-worksites were analyzed using MANOVA, and found to be statistically significant (Pillais $V = 1.79$; approximate $F (72,1014) = 6.00$, $p < .001$); $eta^2 = .30$). Due to the influence of gender it was controlled for using MANCOVA, and the health climate perceptions were still found to be statistically significant between-worksites (Pillais $V = .12$; exact $F (df = 12, 161) = 1.85$; $p < .05$; $eta^2 = .12$) (Ribisl & Reischl, 1993). Lastly, health climate perceptions were found to have statistically significant correlations with measures of employee health outcomes. The employer's health orientation scale was found to have a negative correlation to reported job stress ($r = -.19$, $p < .05$) and a positive correlation with job satisfaction ($r = .48$, $p < .01$). Supervisor social support was negatively correlated to job stress ($r = -.24$, $p < .01$), positively correlated to exercise habits ($r = .16$, $p < .05$) and job satisfaction ($r = .44$, $p < .01$). Co-worker support was positively correlated with job satisfaction ($r = .37$, $p < .01$).

Support for healthy behavior was found to be positively correlated with exercise habits (r = .16, $p < .05$) and healthy nutrition habits (r = .23, $p < .01$), and negatively correlated with smoking status (r = -.22, $p < .01$) (Ribisl & Reischl, 1993). These findings indicate that there is a relationship between organizational health climate and employee health and work behaviors.

The WHCS was mailed to a random sample of full-time employees (N = 231) of a large Midwestern manufacturing company (Morris, Conrad, Marcantonio, Marks, & Ribisl, 1999). The researchers sought to determine if blue-collar workers (n = 148) perceived the worksite health climate differently than white-collar workers (n = 83) (Morris et al., 1999). The data were analyzed using MANOVA, and the researchers found that blue-collar workers have statistically significant differences in their health climate perceptions from white-collar workers (Wilk's lambda = .57, df = 33, 640, $p < .05$, power = .99). These findings suggest health climate has different interpretations among blue-collar workers, and practitioners should seek to include blue-collar workers in the worksite health promotion efforts.

Based on these research studies on health climate (Morris et al., 1999; Ribisl & Reischl, 1993), a request was made of the authors (Ribisl & Reischl, 1993) for permission to use the WHCS scale. The authors deferred to the Worksite Health and Safety Climate Scale (Basen-Engquist et al., 1998) stating the WHCS was outdated. The Worksite Health and Safety Climate Scale was developed for a large randomized trial of a worksite cancer prevention program, the Working Well Trial. The Working Well Trial was a two-year intervention that addressed dietary change and smoking cessation at 114 worksites that were coordinated by four study centers. A subset of 40 worksites were

used in a randomized, matched-pair research design in which the worksite was the unit of analysis ($n = 40$). Employees at 20 natural gas pipeline worksites and 20 rural electrical cooperatives completed a cross-sectional questionnaire at baseline and 3-year follow-up ($n = 6,867$). Control sites received print materials, and intervention sites promoted employee awareness of preventive behaviors through materials and activities, provided action and skills training, and offered support groups or classes (Basen-Engquist et al., 1998). Intervention sites selected an employee coordinator and an employee advisory board to plan and implement the activities.

The WHCS scale was evaluated using exploratory factor analysis, and a two factor solution was found. Factor one contained six items related to safety climate ($\alpha = .82$) accounting for 32.7% of the total variance. Factor two contained five items related to health climate ($\alpha = .74$) accounting for an additional 9% of the variance. The scale was found to be useful in measuring organizational change related to worksite health promotion activities specifically around smoking programs and policies (Basen-Engquist et al., 1998). However, it was not correlated with most employee health behaviors or outcomes. The authors suggested the scale would benefit from additional validity and reliability testing, further testing with different populations, and confirmatory factor analysis.

The last measure of climate discussed in Aldana et al. (2012) is "Culture of Health." The measure was called the Total You Health Values Survey and was used at General Mills in 2009 to measure employees ($n = 3,339$) attitudes regarding worksite health promotion (Crimmins & Halberg, 2009). The authors did not report information

on the validity or reliability of the measure, and no other use of the survey was found in the literature review.

In addition to the three climate scales mentioned by Aldana et al. (2012), the review of the literature found the Practical Scale for Multi-Faceted Organizational Health Climate Assessment (MOHCA) (Zweber, 2012). The MOHCA scale was developed as a practical scale to measure workplace health climate from the employee perspective as part of a Master's Theses. Zweber (2012) defines health climate as, "employee perceptions of active support from upper management as well as supervisors and coworkers for the physical and psychological well-being of employees" (p. 6). The MOHCA was administered to employees to assess their perceptions of organization, supervisor, and workgroup health climate. MOHCA was tested on two samples, one across organization ($n = 531$) and one within-organization ($n = 250$) and was found to be reliable and to have convergent, discriminant, and criterion-related validity.

Based on the findings of these research studies, which suggest a relationship and a direction for that relationship, the following hypothesis is investigated in the present study:

Hypothesis 2: Organizational health climate is positively associated with employee job satisfaction.

Hypothesis 3: Organizational health climate is negatively associated with job stress.

Aldana et al. (2012) reviewed the knowledge base on healthy worksite climate (the authors used the term culture) and found best practices measured by Health Enhancement Research Organization (HERO) and Mercer with the HERO Employee

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Health Management Best Practice Scorecard (HERO Scorecard) and the C. Everett Koop National Health Award indicate organizational and leadership support are important to the success of worksite health promotion programs. However, Adams, Keup, Anderson, and Brockmann (2004) completed a literature review of the database held by the *American Journal of Health Promotion* and found 350 published reports describing health promotion program interventions, only 17 of which included efforts to create a supportive environment. Only one of the 17 met the highest standards for research design.

Due to the lack of research on organizational health climate, there is a void of evidence on the connections between climate and its impact on health care costs, employee behavior (i.e., absenteeism, presenteeism), employee health risk, employee job stress and job satisfaction, and business outcomes. Despite the lack of research on the impact of wellness programs on key business outcomes, Aldana et al. (2012) concluded, "companies seem to recognize the importance of having a worksite culture of health" (p. 415). This study sought to affirm that a relationship exists between leadership, climate and behavior, which will be useful to the business community, educators, and researchers in planning, implementing, and evaluating worksite wellness programming. The discussion now turns to the current research on the employee health and work behavior variables in the conceptual framework.

Employee Health and Work Behaviors

In the model for this study employee health and work behaviors were defined as: (a) retention and productivity, (b) health, and (c) participation in wellness activities.

Retention and productivity. Retention and productivity included measures of job satisfaction, job stress, intention to turnover, employee engagement, and performance. A discussion of the current research using these measures follows.

Job satisfaction. Employee job satisfaction is the most commonly investigated job attitude in the organizational behavior research literature (Wright, 2006); however, only a few studies have included it in relation to organizational health climate (Ribisl & Reischl, 1993; Wilson et al., 2004) and none were found that included it in relation to leadership support for health promotion.

The investigation of the relationship between job satisfaction and job performance has a long history dating back to at least the early 1930s and possibly the late1890s (Wright, 2006). The most comprehensive qualitative and quantitative meta-analysis was done by Judge, Thoresen, Bono, and Patton (2001). The meta-analysis was composed of 312 samples with a combined *N* of 54,417 subjects. The qualitative review looked at the various ways the job satisfaction - job performance relationship had been described and evaluated in the literature and found seven models. The models were: (a) job satisfaction causes job performance, (b) job satisfaction is caused by job performance, (c) the relationship is reciprocal, (d) the relationship is spurious, meaning that the relation is due to a third unmeasured variable, (e) the relationship is moderated by other variables, (f) there is no relationship, and (g) alternative conceptualizations of job satisfaction and/or job performance (Judge et al., 2001). The quantitative meta-analysis estimated the mean true correlation between overall job satisfaction and job performance to be .30. Which is in contrast to prior meta-analysis that found modest correlations (Brayfield & Crockett, 1955; Iaffaldano & Muchinsky, 1985; Vroom, 1964). This finding of a moderate

correlation between overall job satisfaction and job performance means there is some relationship between these two variables, but what is left to be considered is what model best explains this relationship. Interestingly, Wright (2006) proposes that worker well-being may be a better measure for predicting productivity than job satisfaction.

As there have been many studies of job satisfaction, there have also been many ways developed to measure job satisfaction. A meta-analysis conducted by Kinicki, McKee-Ryan, Schriesheim, and Carson (2002) examined the psychometric properties of the Job Descriptive Index (Smith, Kendall, & Hulin, 1969). The researchers found evidence that the Job Descriptive Index is a construct-valid measure of facet satisfaction. However, Judge et al. (2001) encouraged the use of measures of overall (a.k.a., general or global) satisfaction in lieu of facet specific satisfaction when looking at the overall performance relationship. In this study, the overall measures are being considered not the facet specific.

An overall measure of job satisfaction is found in a subscale of The Michigan Organizational Assessment Questionnaire (MOAQ-JSS) (Cammann, Fichman, Jenkins, & Klesh, 1983). The MOAQ was developed as an alternative to the Job Diagnostic Survey (Hackman & Oldham, 1980). Bowling and Hammond (2008) conducted a meta-analysis of the MOAQ-JSS using nomological network of hypothesized antecedents, correlates, and consequences of job satisfaction similar to the strategy used by Kinicki et al. (2002) (see Figure 3).
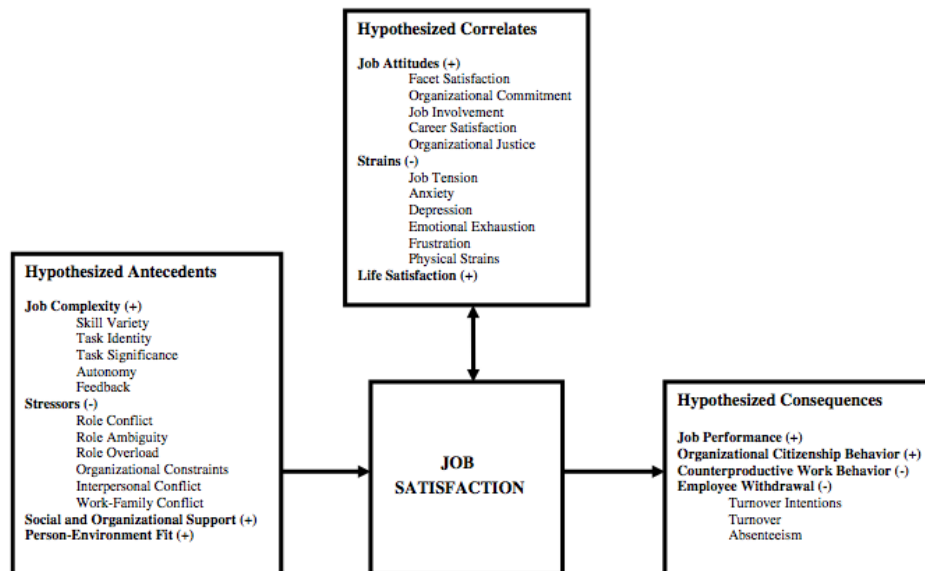
Figure 3. Nomological network of hypothesized antecedents, correlates, and

consequences of job satisfaction (Bowling & Hammond, 2008).

The hypothesized antecedents that will be considered in this study are social and

organizational support (+), evaluated in this study in the context of health climate. The

hypothesized correlates are job tension (a.k.a., job stress) (-) and life satisfaction (+). The

hypothesized consequences are job performance (+), turnover intention (-), and

absenteeism (-). A total of 80 samples with a combined $N = 30,703$ was used in the

meta-analysis (Bowling & Hammond, 2008). The researchers found the MOAQ-JSS to

be a reliable ($\alpha = .84$) and construct-valid measure of job satisfaction. Of interest to this

study, the researchers found job satisfaction to have a mean correlation to: perceived

organizational support ($r = .41$), job tension ($r = -.33$), life satisfaction ($r = .35$), job

performance ($r = .15$), turnover intention ($r = -.52$), and absenteeism ($r = -.12$). These

findings were consistent with the hypothesized nomological network which was based on

decades of theoretical and empirical work on the job satisfaction construct (Bowling & Hammond, 2008).

As already mentioned, job satisfaction was found to have a positive statistically significant correlation to organizational health climate (Ribisl & Reischl, 1993). In addition, a study was done by Wilson et al. (2004) to test a comprehensive model of a healthy work organization with 1, 130 employees from nine stores of one retail organization. Among other things, Wilson et al. (2004) found as employees' perceptions of organizational climate (organizational support, coworker support, participation with others and with supervisors, communication, safety and health climate) rise, there is an associated increase in the way employees relate to their job (associated with job design which was measured using reviews of the job stress literature – workload, control/autonomy, job content, role clarity, environmental and physical work conditions, work scheduling) and their job future in the organization (job security, procedural and distributive equity, learning opportunities, flexible work arrangements). Additionally, a strengthening of job design and job future is associated with a strengthening in psychological work adjustment (job satisfaction, organizational commitment, efficacy, job stress). More specifically and of interest to this study, job satisfaction had a statistically significant correlation with: organizational support ($r = .66$), coworker support ($r = .43$), health/safety ($r = .50$), job stress ($r = -.49$), general health ($r = .12$), turnover intention ($r = -.48$), and absenteeism ($r = -.14$).

Job stress. The measurement of job stress does not have as long a history as job satisfaction, but has a similar past with measurement at both the specific and global levels (Stanton, Balzer, Smith, Parra, & Ironson, 2001). A general measure of work stress was

developed by Stanton et al. (2001) and called the Stress In General (SIG) measure. This measure is really a hybrid, as it is workplace specific and yet a global measure of stress.

The 18-item SIG (Stanton et al., 2001) measure contained adjectives with yes, no, or ? responses. The measure was used with three samples of workers to test the psychometric properties and the validity of the instrument. The first sample ($n = 4,322$) was taken from employees of a large unit of an aerospace company. In addition to the SIG items, the Job in General scale of general satisfaction, the stressors subscales of the Job Stress Index, the Intent to Quit scale, and a single item general stress measure were included. The SIG data were evaluated using factor analysis and three items were dropped from the scale, producing a two-factor solution: Pressure ($\alpha = .88$), and Threat ($\alpha = .82$). The Threat subscale was found to have sizeable correlations with job satisfaction ($r = -.47$) and intention to quit ($r = .36$) (Stanton et al., 2001). A second sample was taken in the context of a larger survey of recruiting and retention conducted for a large national professional organization ($n = 574$) to cross-validate the results from the first study. The measures used in this sample included the SIG items, the Job Stress Index, the Intent to Quit scale, a 13-item measure of work-family balance, and a 15-item measure of racial discrimination in the workplace. Work-family balance was strongly related to the Pressure ($r = .43$) and Threat ($r = .48$) subscales of the SIG, but racial discrimination was not. The last sample was self-selected to participate in a free multiday stress management workshop ($n = 34$), wherein they completed extensive self-report instruments and a stress test where blood-pressure readings were taken as a gross physiological measure reflecting chronic stress. The researchers found the Pressure subscale correlated positively with the systolic blood-pressure reactivity. The Threat

subscale also correlated positively with the blood-pressure rise, but the correlations were weak. Overall, the SIG was found to be a valid and reliable measure; however, it was a global measure in a specific context. Additionally, the measure does not use an interval scale, so the data collected using the measure should not be analyzed using inferential statistical tests.

Cohen, Kamarck, and Mermelstein (1983) developed a 14-item instrument of global perceived stress called the Perceived Stress Scale (PSS). The instrument was used with two groups of college students (n = 332 freshman, and n = 114 class members) and one group of participants (n = 64) in a community smoking cessation program. Coefficient alpha reliability for the PSS was .84, .85, and .86 in each of the respective samples. The instrument was found to be valid and reliable.

Only a few studies have included job stress in relation to organizational health climate (Ribisl & Reischl, 1993; Wilson et al., 2004; Zweber, 2012), and none were found that included it in relation to leadership support for health promotion. As already stated above, Ribisl and Reischl (1993) found the employer's health orientation scale was negatively correlated to reported job stress (r = -.19, p < .05), as was supervisor social support (r = -.24, p < .01). Wilson et al. (2004) adapted the Perceived Stress Scale (Cohen et al., 1983), as a measure of employees' perceptions and reactions to stressors at work. The researchers found that job stress had a statistically significant correlation with: organizational support (r = -.43), coworker support (r = -.37), health/safety (r = -.33), job satisfaction (r = -.49), general health (r = -.15), turnover intention (r = .20), and absenteeism (r = -.16).

Zweber (2012) adapted the Stress in General (SIG) measure in two separate samples while developing the Multi-faceted Organizational Health Climate Assessment (MOHCA). The first sample was cross-organizational ($n = 531$) full-time working adults, and the second sample was within-organization ($n = 250$) health care employees from a northeast state correctional department. Job stress was found to negatively correlate (r = -.25, $p < .01$ and $r = -.45$, $p < .01$; for sample one and two, respectively) with the organizational health climate beyond the effects of perceived organizational support, perceived supervisor support, workgroup cohesion, and safety climate.

Intention to turnover. Tett and Meyer (1993) conducted a meta-analysis on turnover looking at 158 studies (total of 178 samples) that had included job satisfaction, organizational commitment, turnover intention, and turnover. The researchers found that satisfaction ($r = -.58$) and commitment ($r = -.54$) each contribute independently to the prediction of intention/cognition. Intention/cognition was more strongly predicted by satisfaction than by commitment (Tett & Meyer, 1993). Intention/cognition mediated nearly all the attitudinal linkages with turnover. Attitudinal contributions to the turnover process vary with the use of single- versus multi-item scales (i.e., 14% vs. 28%, respectively), the 9- versus 15-item version of the Organizational Commitment Questionnaire, and turnover intention versus withdrawal cognition scales. The researchers conclude that satisfaction and commitment each contribute uniquely to the turnover process; however, the contribution depends on the intentions/cognitions and the choice of measure. Multi-item scales were found to account for more variance than single-item measures (Tett & Meyer, 1993). Another meta-analysis was conducted by Griffeth, Hom, and Gaertner (2000) looking at the predictive strength of antecedents to

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turnover in 42 studies conducted during the 1990s. Job satisfaction, organizational commitment, job search, comparison of alternative, withdrawal cognitions, and quit intentions were the most predictive antecedents.

Employee engagement. (Shuck & Wollard, 2009) defined employee engagement as "an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes" (p. 103). It has been suggested in the literature on human resource development that there may be a relationship between leadership and employee engagement (Christian, Garza, & Slaughter, 2011; Martin & Schmidt, 2010; Mester, Visser, Roodt, & Kellerman, 2003; Shuck & Herd, 2012; Shuck, Rocco, & Albornoz, 2011). It has also been suggested that there is a relationship between organizational climate and employee engagement (Shuck et al., 2011). Employee engagement may be influenced by various work, environmental, and personal factors (Shuck & Herd, 2012; Shuck et al., 2011). One influential factor may be employee health and wellness (Iverson, Olekalns, & Erwin, 1998; Schaufeli, 2012; Schaufeli, Bakker, & Salanova, 2006; Shuck & Reio, 2013).

A *Gallup Management Journal* Employee Engagement Index survey asked US employees how their work lives affect their physical and mental health, using a negative, positive, or not at all response (Crabtree, 2005). Overall, 43% reported that they feel their work lives have a positive effect on their physical health, 29% reported their work lives having a negative effect on their physical health, and 27% reported no relationship between their work lives and physical health. Isolating job categories that are physically demanding makes little difference in these findings. However, there are differences according to employees' engagement levels: among engaged employees 69% feel their

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work positively affects their physical health, 39% among not-engaged employees, and 22% among the actively disengaged. Among actively disengaged employees 54% report their work lives negatively affect their physical health, 31% among not-engaged, and 12% among engaged employees (Crabtree, 2005). When looking at mental health, overall 52% of employees say their work life positively affects their mental health, 21% feel the effect is negative, and 27% say there is no effect. When compared by engagement level, 78% of engaged workers reported their work life benefits their mental health, 48% of not-engaged employees reported their work life benefits their mental health, and 15% of actively disengaged employees reported their work life benefits their mental health. Among actively disengaged employees 51% reported their work lives have a negative effect on their mental health, 20% of not-engaged workers reported their work lives have a negative effect on their mental health, and 6% of engaged workers reported their work lives have a negative effect on their mental health.

The Gallup Management Employee Engagement Survey (Crabtree, 2005) also asked employees if work stress had caused them to behave poorly with their family or friends on three or more days in the past month. Overall, 32% of respondents reported they had behaved poorly with their family or friends on three or more days in the past month due to work stress. However, when looking at the differences according to the engagement levels of the employees, 51% of the actively disengaged employees reported they had behaved poorly with their family or friends on three or more days in the past month due to work stress. Not-engaged employees reported 35% had behaved poorly with their family or friends on three or more days in the past month due to work stress. And 18% of engaged employees reported they had behaved poorly with their family or

friends on three or more days in the past month due to work stress (Crabtree, 2005).

According to these findings, engaged employees feel their work life has a positive effect

on their physical and mental well-being, while disengaged employees tend to feel their

work life has a negative effect on their physical and metal well-being.

 Performance. There is a long history of research seeking to understand the

happy/productive worker thesis, and much of it has focused on job satisfaction as

referenced above in the section on job satisfaction (Bowling & Hammond, 2008; Judge et

al., 2001; Wright, 2006; Wright & Cropanzano, 2004). However, Wright and

Cropanzano (2004) have found that employee psychological well-being (a.k.a.,

happiness) has demonstrated statistically significant correlations ($r = .30$-$.50$) to

employee performance, and suggest that well-being may provide more understanding and

explanation of the happy/productive worker thesis than traditional measures of job

satisfaction (Wright, 2006; Wright & Cropanzano, 2004; Wright & Staw, 1999).

 For example, well-being was considered in a study of the relationship of

employees' perceptions of psychological climate to job involvement, effort, and

performance (Brown & Leigh, 1996). Psychological climate was operationalized as how

employees perceive aspects of the organizational environment and interpret them in

relation to their own well-being, specifically the constructs of psychological safety and

meaningfulness as described by Kahn (1990). Two independent samples of outside

salespeople were collected. The first sample included salespeople from three different

companies (paper goods manufacture ($n = 77$), and two office supplies manufacturing

companies ($n = 85$ and $n = 16$) with at total sample size of 121. The second sample ($n = 161$) included salespeople from a large medical products company. The researchers

found those organizational environments that are perceived as being psychologically safe and meaningful have higher productivity mediated by job involvement and effort.

A more direct look at physical well-being has also been undertaken in a six-month experimental study at the main offices of two large insurance companies was done on the effect of participation in an employee fitness program on absenteeism and productivity (Shephard, Cox, & Corey, 1981). The control company deferred its plans to develop an employee fitness program for one year, and the test company built a gymnasium and changing area in the basement of the main office building. Volunteers were recruited at both companies (test $n = 672$, control $n = 257$) to participate and were given a fitness test. The fitness program was designed for each test participant and included three, 30-minute gymnasium sessions per week based on age and sex. The test company participants were found to make substantial gains in their fitness levels. However, the employee self-reports and supervisor evaluations showed only small and relatively similar gains of productivity, with the reduction of absenteeism at both companies (Shephard et al., 1981).

Health. The Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference (1946) states, "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p.1). Bill Hettler, MD, a co-founder of the National Wellness Institute described the six dimensions of wellness in 1976 as: physical, emotional, occupational, spiritual, intellectual, and social (Hettler, 2003). Harari et al. (2005) summarized that, "wellness is a construct reflecting the process of enhancing life quality by integrating and balancing one's physical, mental and spiritual well-being" (p. 93). While there are many

ways to measure employee health behavior, this study will focus on successful lifestyle changes, overall health and quality of life.

The Centers for Disease Control and Prevention have identified four specific health behaviors which can contribute to a longer, healthier life: avoid excessive alcohol use, avoid tobacco, improve nutrition, and engage in physical activity (Centers for Disease Control and Prevention, 2009). Nutrition and exercise norms were analyzed in a workplace climate study and were found to be related to employee nutrition and exercise behavior (Ribisl & Reischl, 1993). This finding demonstrates a relationship between organizational health climate (norms) and employee health behavior (specifically nutrition and exercise).

Wilson et al. (2004) evaluated employee health and well-being as measured by alcohol use, tobacco use, employee perceived general health, psychological health, and attendance behavior (turnover intentions and absenteeism). The organizational health literature refers to absenteeism and presenteeism as measures of employer outcomes of productivity (Goetzel et al., 2004; Musich et al., 2006; Sears et al., 2013; Shi, Sears, Coberley, & Pope, 2013; Wilson et al., 2004). Absenteeism is often defined as unscheduled absences, while presenteeism is defined as the impaired performance while present on the job (Musich et al., 2006). Wilson et al. (2004) found as job satisfaction increases and job stress decreases there is a corresponding decrease in alcohol consumption ($r^2 = .24$), tobacco use ($r^2 = .01$), intentions to quit ($r^2 = .24$), and absenteeism ($r^2 = .04$), and increases in psychological health ($r^2 = .17$), and perceptions of general health ($r^2 = .02$).

The relationship between stress level, health behaviors, and quality of life in employees ($N = 13,882$) joining a worksite wellness center were evaluated by Clark et al. (2011). Stress level was measured using one item on a scale from zero to ten; current health status was measured using four items on a scale from zero to ten related to walking up stairs, sleep, overall health, and overall quality of life, and five yes/no items about tobacco use, overweight, high blood pressure, high cholesterol, and high blood sugar; current health behavior was measured using four items on a scale of zero to ten related to physical activity, nutrition, and support. Of those sampled, 2147 reported high stress levels (response < 4), and statistically significant differences were found between the high and low stress respondents on most current health status items and all the current health behavior items. The mean overall health, quality of life, lack of fatigue from walking up two flights of stairs, and lack of fatigue after a typical night's sleep was higher for those with low stress. Those with high stress more frequently reported issues with being overweight, high blood pressure, high cholesterol, and high blood sugar. The mean level of physical activity, having a physically active lifestyle, current nutritional habits, and support for maintaining healthy living was higher for those with low stress. In summary, high stress employees reported having the most health problems, poorer perceived health, poor quality of live, and negative health behaviors and indicated that they had little confidence or support for change.

Based on the findings of these research studies, the following hypothesis is investigated in the present study:

Hypothesis 4: Organizational health climate is positively associated with health behaviors.

Participation in wellness activities. A formal and universally accepted

definition of a workplace wellness program does not yet exist in the literature; however,

Mattke et al. (2012) offered that, "broadly, a workplace wellness program is an

employment-based activity or employer-sponsored benefit aimed at promoting health-

related behaviors (primary prevention or health promotion) and disease management

(secondary prevention)" (p. 5). DeJoy and Wilson (2003) encouraged the broadening of

workplace health promotion to include the organization itself, and so introduced the term

organizational health promotion. DeJoy and Wilson (2003) stated, "organizational health

promotion emphasizes the dynamic interplay of individual and organizational factors and

how this interaction affects the optimal use of the people resources of the organization"

(p. 337). O'Donnell (2009) provided a definition of health promotion to be used to guide

research, practitioners and content in the American Journal of Health Promotion:

> Health Promotion is the art and science of helping people discover the synergies
> between their core passions and optimal health, enhancing their motivation to
> strive for optimal health, and supporting them in changing their lifestyle to move
> toward a state of optimal health. Optimal health is a dynamic balance of physical,
> emotional, social, spiritual, and intellectual health. Lifestyle change can be
> facilitated through a combination of learning experiences that enhance awareness,
> increase motivation, and build skills and, most important, through the creation of
> opportunities that open access to environments that make positive health practices
> the easiest choice.

Despite the lack of a clear definition there seems to be agreement among employers that

worksite wellness programs should be offered, as 92 percent of employers with 200 or

more employees reported offering a wellness program in 2009 (Mattke et al., 2012).

Organizational health promotion programs vary greatly in their offerings (Mattke

et al., 2012). Healthy People 2010 defined five key elements of a comprehensive

worksite health promotion program: 1) health education, 2) supportive social and

physical environments, 3) integration of the worksite program into an organization's structure, 4) links to related employee services, and 5) employee screenings with adequate treatment and follow up (Partnership for Prevention, 2001). Despite the definition and encouragement to implement comprehensive worksite health promotion programs, a 2004 survey conducted by the Partnership for Prevention and the Office of Disease Prevention and Health Promotion found that, of the 1500 worksites in a representative sample, only 6.9% offered all five of the key elements of a comprehensive program (Linnan et al., 2008). Based on the results of the survey research presented here, an overwhelming majority of employers with 200 or more employees are offering some form of wellness programming, but it appears they are not offering the recommended comprehensive wellness programming.

Some empirical research has been done with regard to participation in wellness activities, as the attraction and involvement of employees in wellness programs is critical to reaching the wellness program objectives. Much of the early research on wellness program participation focused on individual determinants (i.e., sex, age) (Shephard et al., 1981), and used the social ecological model as the theoretical foundation, but did not incorporate the environment into their investigations (Sloan & Gruman, 1988). However, participation in workplace health promotion programs is both an organizational activity and a health promotion activity per Sloan and Gruman (1988).

One of the early studies on both the individual and organizational factors that influence employee participation in worksite health promotion programs was conducted at AT&T Communications ($n = 192$) (Sloan & Gruman, 1988). Participation was defined as attendance at the orientation meeting, and employees were allowed to participate on

company time with no requirements to make up the time. Organizational climate was found to be higher among participant than nonparticipants. More specifically, supervisor support and control over work matters were significantly greater for participants. Sex was found to have a significant effect upon participation in wellness activities, but not age. Regardless of the climate rating, women were significantly more likely than men to participate ($p > .05$).

As already mentioned under the section on leadership support for health promotion, Crump et al. (1996) concluded that leadership support for health promotion and organizational health climate were influential in determining employee participation in worksite health promotion programs. Based on the findings of these research studies, the following hypothesis is investigated in the present study:

Hypothesis 5: Leadership support for health promotion and organizational health climate is positively associated with employee participation in wellness program activities.

Closing Thoughts

Organizations today are facing motivation to change based on the three processes put forth by Schein (2004): (a) disconfirming data as presented in rising health care costs mostly due to employee lifestyle and behavior choices; (b) anxiety due to unsustainable costs where in the most extreme cases the costs are so high they threaten to close businesses; (c) a visionary or transformational leader providing the psychological safety in messages and structures to educate, support and encourage employees on their health and wellness journey and at the same time allowing for individual solutions and approaches to health and wellness concerns.

The social ecological model provides the framework through which we can research the relationship among individual-level and organizational-level factors on employee health behaviors. Scholarly discussions emphasize the importance of leadership support for health promotion; however, there are very few research studies that have operationalized leadership support for health promotion (Della et al., 2008; Della et al., 2010). Research into the relationship between leadership support, organizational health climate, and employee health behaviors is even more scant. Additionally, organizational health climate has been discussed as an important factor contributing to employee health behaviors, but not operationalized at the level of employee perception and only examined by a few researchers in relation to the impact on employee health behavior (Ribisl & Reischl, 1993; Zweber, 2012).

To examine the identified gaps in the literature, a conceptual model of the relationship between leadership support for health promotion, organizational health climate, and employee health behaviors is proposed (see Fig. 2). The following research questions are designed to test this model:

RQ1. To what extent is there a relationship between leadership support for health promotion and organizational health climate?

RQ2. To what extent is there a relationship between leadership support for health promotion and employee work and health behaviors?

RQ3. To what extent is there a relationship between organizational health climate and employee work and health behaviors?

RQ4. To what extent do employees' perceptions of leadership support for health promotion and organizational health climate explain variance in employee work and health behaviors?

This chapter has presented the literature relevant to this study. The literature provides some preliminary evidence and reasoning for the investigation of the relationship between leadership support for health promotion and organizational health climate. However, little research was found on the relationship between leadership support for health promotion and employee health behaviors. Organizational health climate research has demonstrated a correlation with employee health behaviors although there is a call for further studies to add to this small body of research. Consequently, there is a demonstrated gap in the literature defining the relationship among leadership support for health promotion, organizational health climate, and employee health behaviors. Chapter III will present the methods to be utilized to conduct this specific study of worksite health promotion.

CHAPTER III

RESEARCH METHOD

The purpose of this study was to describe and empirically assess the relationship between employees' perceptions of leadership support for health promotion, organizational health climate, and employee health and work behaviors. This chapter presents the study methods to be used to answer the research questions and to test the hypotheses introduced in Chapter II. This chapter includes: (a) the research questions, (b) the hypotheses, (c) a description of the sample, (d) an explanation of the study design (e) explanation of the variables and a presentation of the instruments used to operationalize them, (f) the data collection process to be utilized, and (g) the data analysis techniques to be used to answer the research questions.

Research Questions

The variables explored in this study were employees' perceptions of leadership support for health promotion, organizational health climate, and employee outcome behaviors (retention and productivity, health, and participation in wellness activities). The research questions used to explore the relationship among these variables were:

RQ1. To what extent is there a relationship between employees' perceptions of leadership support for health promotion and organizational health climate?

RQ2. To what extent is there a relationship between employees' perceptions of leadership support for health promotion and employee work and health behaviors?

RQ3. To what extent is there a relationship between organizational health climate and employee work and health behaviors?

RQ4. To what extent do employees' perceptions of leadership support for health promotion and organizational health climate explain variance in employee work and health behaviors?

Hypotheses

Based on the reviewed literature and the general research questions outlined above, this study tested the following set of study hypotheses:

1. Leadership support is positively associated with organizational health climate and employee health behaviors.

2. Organizational health climate is positively associated with employee job satisfaction.

3. Organizational health climate is negatively associated with job stress.

4. Organizational health climate is positively associated with health behaviors.

5. Leadership support for health promotion and organizational health climate is positively associated with employee participation in wellness program activities.

Population and Sample Size

The population for this study was employees at all levels in the targeted companies, which had a variety of wellness programs ranging from basic to comprehensive. The four companies that agreed to participate in this research project were Bank ($n = 1058$), Private University ($n = 197$), Wholesale Supplier ($n = 247$), and

Public University ($n = 6500$). Approval was obtained from the Human Subjects

Committee at the University of Louisville before research questionnaires were

disseminated. The point of contact at each of the companies supported the dissemination

of an electronic survey to their employees, as well as paper-based versions of the survey

for employees without consistent access to computers. The company point-of-contact

was consulted regarding how long the wellness program had been offered, what kids of

programs and services were offered, how many people the organization employed, and

what percentage of employees participated in existing programs. Wellness program

summaries are provided below to give contextual understanding of the wellness programs

offered at each organization.

In order to make inferences from the sample to the population, the size of the

sample needed was calculated (Hinkle, Wiersma, & Jurs, 2003). For correlational

analysis, a sample size of at least 5 and up to 50 participants per variable is recommended

(Green, 1991). Given that this study had 17 variables, a minimum total sample size of 85

would be recommended. For multiple regression analysis, 15 subjects are recommended

per predictor for a reliable equation (Stevens, 2002). Given that this study will have 7

predictors, a minimum total sample size of 105 would be recommended. In addition to

these general guidelines, an analysis of power equal to .80 with an effect size of .10 and

an alpha of .05 recommended a sample size of 619 (Hinkle et al., 2003). For the purpose

of this study, a sample size of approximately 600 participants were sought to strengthen

statistical power and reduce the likelihood of a Type II error.

Bank

The bank headquartered in a southeast state in the United States. The company

has locations throughout Kentucky, Tennessee, and West Virginia. The bank employs 1058, of which 77% are women. The bank uses a self-funded medical plan, and in 1994 began tracking its health care costs. By 1997 substantial evidence was found to support the need for more proactive and preventive health care, so the bank decided to integrate corporate wellness and health care benefits to ensure employees' willingness to take part in wellness related activities. Since 1997 the bank has sought to contain health care costs and to create a culture of wellness. The bank strives to link wellness with other organizational goals, and specifically hopes to save lives and save money through the wellness program.

Prevention and wellness activities are achieved through a partnership with an outside vendor. Programs and services include: comprehensive medical plan; employee assistance program; biometric screenings (weight, BMI, blood pressure, cholesterol check, full panel blood work, pre-screening for diabetes, and a PSA); 24/7 nurse phone line available to all employees enrolled in the benefits plan; on-site flu shots; on-going seminars and educational opportunities related to prevention and enrichment.

The wellness program participation rate is approximately 40%. The Senior Vice President-Human Resources Division said "We are happy with the number because so many of our employees use the wellness and preventive care services provided in our medical plan" (personal communication, November 16, 2013). People are healthier and there seems to be a shift in corporate culture toward healthier choices. Health care premium costs were basically flat from 2006 to 201, with a small increase in 2012, and no increases through 2014.

Private University

The private university is a religiously affiliated, undergraduate and graduate teaching institution located in a southeast state in the United States. The private university employs 197 full-time employees, of which 57% are female. The private university is fully insured, and established a wellness program in 2009. There is no one on staff whose position is dedicated to wellness, and no one that has any specialized training that is wellness related.

Programs and services include: a pay for lunch 3 days per week if an employee walks before or after their lunch; free Zumba classes twice a week; and added a stretching, yoga-like class once per week on January 30, 2014. The private university offered free annual biometric screenings, but may have to discontinue this service this year due to financial constraints. Additionally, in the past, some lunch & learn sessions were offered. Participation in the wellness program activities varies: about 60% participated in the free biometric screenings, maybe 5% attend Zumba classes, and the walk for a free lunch program seems to be more active during the summer when the weather is nicer.

Wholesale Supplier

The wholesale supplier is headquartered in a southeast state in the United States. The wholesale supplier has locations throughout Kentucky and Indiana, and employs 251, of which approximately 70% are men. A wellness program was established in 2005. Approximately 162 employees are covered under the organization's insurance, which requires participation in the biometric screenings. In addition, biometric screenings were offered to any employees not on the organization's insurance coverage and approximately 17 employees participated. So, the participation rate in

biometric screenings is around 71%.

In 2011, the wholesale supplier organized a wellness committee to meet monthly to discuss new ideas to encourage employees. Programs and services include: biometric screenings; free flu shots for employees; a six-month program for diabetes prevention; coaching for blood pressure, diabetes, overweight, exercise, eating right, and giving up smoking; Biggest Loser and Maintain Not Gain contests; and participation in two of the local 5K run/walks.   The wholesale supplier has awarded prizes to the winners of the Biggest Loser and Maintain Not Gain contests, given away t-shirts to those employees that participated in the 5K run/walks, and given away water bottles out to encourage drinking more water. In 2013, the wholesale supplier began providing a free healthy snack to employees.

Public University

The public research university is located in a state in the southeast United States. The public university employs approximately 6500 faculty and staff, and 54% are female. The public university adopted a self-funded medical plan in 2002. The University implemented its health management program in 2005 as a means of controlling health care costs. Health care claims data were analyzed to identify the drivers of health care costs. The top three results were stress, lack of physical activity, and obesity.

The health management program is integrated into the benefits package, and has a voluntary, participation-based design. Programs and services offered include: health risk assessment; health advising/coaching; onsite wellness coaching; onsite comprehensive wellness center; wellness classes (i.e., smoking cessation, stress management, weight

management, mindfulness); fitness classes (i.e., 25+ group fitness classes each week ranging from Ab Lab to Zumba, running club, boot camp, water fitness); and disease management programs for diabetes, chronic obstructive pulmonary disease (COPD), and mental health (coming in 2014).

The participation rate in the health management program is 75+% of the public universities' benefit eligible employees in 2014. All employees can participate and earn the rewards of good health. The health management program uses the following incentives/rewards for participation: (a) $40 monthly premium incentive ($480 annually), and (b) additional incentives can be earned for participation in various programs and wellness offerings (i.e., pedometer, t-shirt, lunch bag). All employees can participate and earn the same rewards. Rewards are based on participation in wellness activities not goal attainment.

Since 2005, the public university has reduced its annual increase in health care costs to below the national trend. In 2008, the public university found that for every $1 invested there is a $3 return on investment. Annual health care costs have increased only 2.5% for employees participating in the health management program compared to 19.5% for those not participating. An estimated $4.3 million in reduced claims spending was the reported outcome for an analysis of the overall program return on investment between October 2007 and October 2011. A benefit cost ratio of 7.16:1 was the documented savings after four years. Program participants saw an average claims savings of $1,300. The public university has saved over $4.0 million for the 2011-health plan year, and the executive leadership allocated these savings to salary increases for faculty and staff in 2011-2012.

Multiple employee testimonies showcase improved 'quality of life'. Employee feedback from the health and disease management program participants clearly demonstrates the value of health management and disease management programs to convey institutional value to employees. One employee who decided to take control of her long-ignored Type II diabetes, and who has volunteered to share her personal story with other employees said, "I think the University may have saved my life" (Retrieved from the public universities website). The value of that investment is priceless, according to the health management program Director.

The public university and the bank have well-established and comprehensive wellness programs. The wholesale supplier has recently initiated its program, which advocates for employee participation in wellness activities, and the private university does not have a formal wellness program. The inclusion of companies with different start dates and offerings provided more variance in the data, which allowed for more meaningful interpretation of the results.

Study Design

This was an exploratory study as no earlier studies were found which specifically investigated all the variables in this study (Labaree, 2013). This study was conducted to investigate the relationship among employees' perceptions of leadership support for health promotion, organizational health climate, and employee health behaviors. Questionnaire surveys were used to collect primary data from employees at four different employers in three industries in the Commonwealth of Kentucky. Kentucky has high levels of chronic disease, according to the CDC, Kentucky leads the nation in deaths from cancer, is sixth in diabetes, is eighth in heart disease, and is thirteenth in stroke (Centers

for Disease Control and Prevention, 2010). By exploring the influence of leadership support for health promotion and organizational health climate on employee health and work behaviors in a state with high levels of chronic disease may offer some insight that would not otherwise be available in a different state.

The study employed descriptive, correlational and regression analysis. Frequency analysis provided the description of the sample. Correlation analysis provided a measure of the strength and direction of the relationships between the dependent variables (employee work and health behaviors) and each of the independent variables (leadership support for health promotion and organizational health climate). The regression analysis provided an explanation of the variance in employee work and health behaviors accounted for by employees' perceptions of leadership support for health promotion and by organizational health climate.

Survey Research

Survey research is a widely accepted and common research technique used in social science and business research. Surveys are generally conducted via face-to-face interviews, telephone interviews, Interactive Voice Response, mail, e-mail, and Web-based or paper questionnaires (Dillman, 2007). When choosing which survey mode to use, Dillman (2007) suggests that the mode be tailored to the population. The majority of the sample used in this study is known to have established email addresses used for work. In the participant companies where email access was not available, a paper-based version of the questionnaire was offered.

Advantages associated with e-mail and Web-based survey research, include lower costs (no paper, no postage, etc.), inclusion of a large population, and decreased time

required for survey implementation (Dillman, 2007). However, the access to e-mail and Web-based surveys must take into account the varied computer age, type, capacity, Internet browser and speed. Hence, the recommendation is to keep the questionnaire design simple (no fancy use of technology, color, or graphics) and to focus on survey quality, which will help reduce the possibility of survey error.

Reducing survey error. There are four types of survey error to consider in survey research regardless of the mode: sampling, coverage, measurement, and nonresponse (Dillman, 2007).

Sampling error. Sampling error occurs when only some of the population is surveyed and not all (Dillman, 2007). In this study efforts to reach every individual employee at the participant companies were made through planning conversations with the point of contact at each organization. The study relied on the human resource manager or the wellness coordinator for support to reach the individual employees. It is possible the survey was not be forwarded to all employees, some employees may not have had access to email, or the individual employees choose not to participate thus increasing the possible sampling error.

Coverage error. Coverage error is the result of not giving all members of the survey population equal opportunity to participate in the survey (Dillman, 2007). It was recognized that there might be coverage error among employees at the organizations researched in this study because at many places of employment blue-collar, part-time, seasonal, and temporary employees may not have an email address or access to the Internet. In these instances, paper-based surveys were provided. Every effort was made to ensure that all employees had access to a version of the survey, either electronically

distributed or via paper. For example, paper surveys were available for University of Louisville employees who attended the benefits open enrollment fairs on October 28 and 29, 2013. The employees who attended the open enrollment fair were those who mostly likely did not have access to email while at work. This helped decrease coverage error by providing access to the survey for those without email or Internet access.

Measurement error. Measurement error is the result of poor question wording or presentation that results in answers that are inaccurate or unusable (Dillman, 2007). To reduce measurement error, this study relied on established instruments with known levels of acceptable reliability and validity to measure the variables in the study.

Nonresponse error. Dillman (2007) explains nonresponse error occurs when the people who respond to the survey are different from those who did not in some way that is relevant to the study. It was not possible to track who had and who had not completed the survey, as the researcher relied on the point of contact to disseminate the survey. Therefore, it was challenging to identify and control for differences between respondents and non-respondents. However, Creswell (2009) indicated that late respondents often have responses similar to non-respondents. Additionally, Groves (2006) suggested non-significant differences between early and late respondents indicates the sample sufficiently represents non-respondents. Dillman (2007) suggests that by carefully designing survey questions and survey layout, and by having a strong implementation plan researchers can reduce measurement and nonresponse error while simultaneously improving response rates. To encourage participation, employees will be sent the invitation to complete the questionnaire on three separate occasions.

Response rates. An estimated 8,000 employees were invited to participate in this survey (6500 at a public university, 247 at a wholesale supplier, 197 at a private university, and 1058 at a bank). It was anticipated that the majority of the respondents would complete the survey via the Internet from a link in an email received from the human resources manager or the wellness coordinator. In order to reduce nonresponse survey error and to improve response rates, a paper-based survey was be made available to those participants who work in jobs that do not have access to the Internet (e.g., facilities). However, the possibility of measurement error increased due to the use of a mixed-mode survey. Dillman (2007) emphasizes the importance of, "writing survey questions and presenting them visually, in ways that would minimize differences in answers between modes by finding common ground for construction" (p. 459). The importance of constructing a respondent-friendly questionnaire that translated well from the Internet to paper was given careful consideration; however, the potential benefit of including those that may not otherwise respond outweighed the risk of measurement error.

Improving response rates. Most of the research done on improving response rates has been based on mail surveys and resulted in the Tailored Design Method (Dillman, 2007). There are five elements to the Tailored Design Method implementation process that must be refined to match the specific research situation, but that should generally achieve good results: "(1) a respondent-friendly questionnaire, (2) up to five contacts with the questionnaire recipient, (3) inclusion of stamped return envelopes, (4) personalized correspondence, and (5) a token financial incentive that is sent with the survey request" (Dillman, 2007, p. 150). For both mail and email surveys, pre-

notification and reminder messages have helped improve response rates (Sheehan, 2001). In a meta-analysis comparing mail surveys and electronic surveys found the average response rates for Internet-based surveys was around 34% (Cook, Heath, & Thompson, 2000). The factors that most influenced electronic survey response rates were similar to those used in mail surveys: number of contacts, personalized contacts and pre-contacts (Cook et al., 2000). In the current research study only emailed surveys and available paper copies were provided; surveys were not be mailed, and no financial incentives were be provided. However, pre-notification and multiple contacts were used in an effort to increase survey response rates.

Survey design and implementation. The principles of the Tailored Design Method (Dillman, 2007) were used to guide the design and implementation of this survey research. The principles for both the e-mail and web surveys will be considered as the survey will be disseminated through email and accessed on the web. A three contact e-mail survey strategy was used.

The design and implementation process followed for this study is summarized in the Table 2.

Table 2

Survey Implementation Process (Dillman, 2007)

Step	Week	Description of Activity
1	1	Identify panel of 3-5 Human Resource Managers and Wellness Coordinators to review survey for appropriate content in relationship to the variables in the study (Content Validity).
2	1	Conduct pilot study with 15 to 20 participants to evaluate amount of time required to complete survey.
3	1	Contact representative at each company to discuss sample and distribution.
4	2	Electronically disseminate pre-notification via contact person.
5	2	Electronically disseminate survey via contact person (2-3 days after pre-notification).

| 6 | 3 | Electronically disseminate email reminder and thank you notification via contact person (one week after survey). |

Instrument Development

      Independent variables. The independent variables in this study were employees' perceptions of leadership support for health promotion, organizational health climate, and demographic variables. All the specific measures that were used in this study are presented in Appendix A.

      Leadership support. The Leading by Example (LBE) Instrument was used to assess leadership support for health promotion (Della et al., 2008). The LBE was developed based on a "Leading by Example" checklist developed by the Partnership for Prevention. Steps were taken to evaluate the content and face validity, and factor analysis was used to test and confirm the construct validity and to test the discriminant validity (Della et al., 2008).   A 13-item instrument resulted with the recommendation that items be added to several factors, so that they have stronger content validity and improved internal consistency.

      An updated version of the LBE Instrument (Della et al., 2008) was provided by Dr. Della (personal communication, October 17, 2013). The updated version has 17 items that ask participants for their agreement with statements using a five-point Likert type scale (1 = *disagree strongly*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *agree strongly*). The sample in the past had been leadership, health services staff, and members of the employee advisory committee (Della et al., 2008; Della et al., 2010). For the purpose of this study, the sample was all levels of employee. Therefore, the item wording was revised, per feedback received from the dissertation committee members and the five subject matter experts, for broader understanding. The revised LBE items

used in this study can be found in Appendix A. The LBE has a reported four factor

solution: (a) business alignment with health objectives (α = .80), (b) awareness of the

economics of health and productivity (α = .72), (c) worksite health support for health

promotion (α = .65), and (d) leadership support for health promotion (α = .76) (Della et

al., 2008).

Organizational health climate. Of the instruments identified to measure

organizational health climate, the Lifegain Health Culture Audit© (Lifegain) was the

most comprehensive as it includes measures of cultural norms, cultural values, cultural

touch point, peer supports, cultural climate, and rites, symbols & rituals (Allen, 2008;

Golaszewski et al., 2008; Hoebbel et al., 2012). In addition, Lifegain© includes

questions that address norms and support for health behavior. Therefore, Lifegain© was

the instrument used to measure organizational health climate.

The Lifegain Health Culture Audit© is a proprietary measure owned by the

Human Resources Institute. Dr. Judd Allen granted permission to use the most recent

version of the instrument (Appendix B), and provided it via personal communication.

There is a short-form version of the survey referenced in the research literature

(Golaszewski et al., 2008) which contains 25 statements that participants rate their

agreement with on a five-point Likert type scale (1 = *disagree strongly*, 2 = *disagree*, 3 =

neutral, 4 = *agree*, 5 = *agree strongly*). The scale has a reported Cronbach's alpha of .93

(Golaszewski et al., 2008). The updated version of the Lifegain© (Allen, 2008) has 40

items, with an additional eight questions about health behaviors which will be discussed

below.

Demographic questions. Participants were asked to report their length of service, age in a range, sex, race/ethnicity, highest level of education, role in organization, job status, and classification of organization industry.

Dependent variables. Employee health behavior and work attitudes were assessed using measures of retention and productivity (job satisfaction, job stress, intentions to turnover, employee engagement, and performance), participation in the organization's wellness program, and health-related behavior (successful lifestyle changes (i.e., lose weight, eat healthier), overall health, and overall quality of life). All the specific measures that were used in this study are presented in Appendix A.

Retention and productivity. Measures of job satisfaction, job stress, intention to turnover, employee engagement, and performance were used to operationalize retention and productivity.

Job satisfaction. Job satisfaction was measured using the Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (MOAQ-JSS) (Cammann, Fichman, Jenkins, & Klesh, 1979; Cammann et al., 1983). The three survey items used to measure job satisfaction ask participants to rate their agreement with each statement on a five-point Likert type scale (1 = *disagree strongly*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *agree strongly*). The scale has a reported Cronbach's alpha of .88 (Allen, 2001) and .84 in a meta-analysis using 79 samples (*N* = 30,623) (Bowling & Hammond, 2008).

Job stress. Job stress was measured using a six-item scale adapted from Cohen et al. (1983) which was used by Wilson et al. (2004). The full 14-item scale has a reported Cronbach's alpha of .84, .85, and .86 in three studies reported by Cohen et al. (1983), and

Wilson et al. (2004) reported α = .88 for the adapted six-item scale. The six survey items used to measure job stress ask participants for their perceptions and feelings about their job and about working at their company as it relates to their current work situation on a five-point Likert type scale (1 = *never*, 2 = *almost never*, 3 = *sometimes*, 4 = *fairly often*, 5 = *very often*).

Employee engagement. Employee engagement was measured using a modified version of the job engagement scale developed by Rich, Lepine, and Crawford (2010) based on Kahn's theory of engagement (Kahn, 1990). The original survey contained 18 statements that participants rate their agreement with on a five-point Likert type scale (1 = *disagree strongly*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *agree strongly*). The scale has a reported Cronbach's alpha of .95 (Rich et al., 2010). The modified version contained six items.

Intention to turnover. Intention to turnover was measured using the Intention to Turnover Scale (ITS; Colarelli, 1984). The ITS is a three-item scale used to measure employee's future intention to leave an organization on a five-point Likert type scale (1 = *disagree strongly*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *agree strongly*). The scale has a reported Cronbach's alpha of .75 (Colarelli, 1984) and .86 (Saks & Ashforth, 1997).

Performance. The absenteeism and presenteeism questions of the World Health Organization's Health and Work Performance Questionnaire (WHO-HPQ) (Kessler et al., 2004) were used to measure performance. Absenteeism questions solicit information in both four-week and seven-day estimates. There are eight fill in questions requesting the number of hours they work, the number of hours they are expected work, the number of days they missed work, and the days they come in early, go home late, or work on a day

off. There are three questions measuring presenteeism on a scale from zero-to-ten with anchors of 0 = worst performance, and 10 = top performance. This scale was modified for this study to a seven-point Likert-type scale (1 = *worst performance*, 2 = *very poor performance*, 3 = *poor performance*, 4 = *neither good nor poor*, 5 = *good performance*, 6 = *very good performance*, 7 = *top performance*), and the two items measuring respondent's usual performance and overall performance were combined into a performance scale.

  Health-related behavior. There are many ways to measure and evaluate health-related behavior. The updated Lifegain© (Allen, 2008) included eight self-report items, which were used to measure successful lifestyle changes. The eight items (e.g., lose weight, eat healthier) ask participants to rate their degree of success in the past 12 months on a three-point scale. The scale was expanded to a five-point scale (1 = *not at all successful*, 2 = *a little successful*, 3 = *somewhat successful*, 4 = *moderately successful*, 5= *very successful*, with a *not applicable* option). Additionally, two global measures of overall health and overall quality of life were incorporated into the survey. Two survey items were adapted from Clark et al. (2011) to measure current health status. The items were originally on a zero to ten scale with anchors at zero and ten, and for this study the measures of overall health and of overall quality of life were given on a five-point scale (1 = *extremely poor*, 2 = *poor* 3 = *fair*, 4 = *good*, 5 = *excellent*).

  Participation in wellness activities. Questions about employee participation in health-related programs were developed for this study based on previous research on employee participation in wellness activities (Crump et al., 1996; Grossmeier, 2013; Seaverson et al., 2009; Taitel et al., 2008; Wilhide et al., 2008). These items included

seven self-report Likert-scaled items relating to the extent of participation in the organization's wellness program (1 = *not at all*, 2 = *a little*, 3 = *somewhat*, 4 = *to a considerable extent*, 5 = *to a great extent*).

Data Analysis

The SPSS (Statistical Package for the Social Science) statistical application version 21for Mac was used to analyze the data collected. Most data collected was interval-level and some of the demographic variables were categorical-level data.

Data collected electronically was downloaded from Survey Monkey into SPSS (Version 21 for Mac). Data collected via paper surveys was hand-entered into the SPSS data file. The overall data set was examined to identify any non-useable surveys.

After the data set was examined as a whole for non-responses, descriptive statistics (means, standard deviations, and frequencies) were performed on all the data to identify responses that have been entered incorrectly and outliers, in order to delete cases as appropriate and to get the data cleaned up for the focal analyses.

Once the data set was suitably prepared, descriptive statistics (means, standard deviations, and frequencies) were examined for all variables in the study. Internal consistency statistics (Cronbach's alpha) were evaluated for all scale measures with multiple Likert-scaled items to verify acceptable internal consistency reliability for all variables in the study.

Differences between organizations was then be evaluated, to determine whether the data set as a whole can be used to investigate the research questions, or whether organization variables should be controlled for in the analyses.

Primary analyses proceeded with investigation of correlations among variables, in order to answer the first three research questions numbers. In addition, regression analysis was used to investigate the research questions pertaining to how much variance is accounted for in the dependent variables by the independent variables, relative to each other, and to assess the moderating and mediating effects of individual variables. As this was an exploratory study with only a few clear antecedent and outcome variables available for prediction on a few of the dependent variables, a series of simultaneous regression equations will be used to produce equations with the maximal amount of variance accounted for by the predictors (Pedhazur, 1997).

Assumptions of the Selected Statistical Tests

In order to determine the relationship, or correlation, between two variables two conditions must be met: (a) the two variables must be paired observations for the same set of individuals, and (b) the variables being correlated must be measured on an interval or ratio scale (Hinkle et al., 2003). In addition, there are three factors that affect the size of the correlation: (a) linearity, (b) homogeneity of the group, (c) size of the group. Additionally, the assumptions of multiple regression were examined: outliers, normality of residuals, homoscedasticity, linearity, and collinearity (Pedhazur, 1997). All the assumptions will be considered prior to analyzing the data. If any of the assumptions were violated the researcher determined the appropriate next steps, as serious violations of any of these assumptions may make inferences drawn from the results of this study unreliable.

Normality. Distribution of the predictor variable is normal, with the mean of each equal to the predicted score (Y) for the given X (Hinkle et al., 2003). A histogram of

the dependent variable provided a visual assessment of the distribution, which should resemble a bell shaped curve (Stevens, 2002).

Homoscedasticity. Homoscedasticity assumes that the standard deviations of conditional distributions are equal. A review of the regression standardized predicted value on the regression studentized residual for each dependent variable will be examined to determine if the points are randomly distributed above and below the line (Pedhazur, 1997), this is also a check for normality.

Multicollinearity. Multicollinearity occurs when there are high intercorrelations among the predictor variables (Stevens, 2002). A review of the correlations among the predictor variables from the correlation matrix provides some indication of potential multicollinearity. In addition, the variance inflation factors (VIF) for the predictors can be examined. If any VIF exceed 10, then the variable should be deleted (Stevens, 2002)

Linearity. Linearity assumes the relationship between the independent and dependent variables is linear (Cohen, Cohen, West, & Aiken, 2003). Linearity is most often confirmed by using a bivariate scatterplot (Hinkle et al., 2003).

<div style="text-align: center;">Summary</div>

Chapter III outlines the methods to be used to empirically assess the relationship between employees' perceptions of leadership support for health promotion, organizational health climate, and employee health behaviors. The sample and procedures to be used to gather the data, as well as the operationalization of the variables and the rationale for their inclusion is described. Lastly, the data analysis techniques to be used to answer the research questions and to test the hypotheses were presented. The

results of this study will be presented in Chapter IV. Conclusions and areas for future

research will be discussed in Chapter V.

CHAPTER IV

RESULTS

The purpose of this study was to explore the relationship between employees'

perceptions of leadership support for health promotion, organizational health climate, and

employee health and work behaviors. More specifically, the researcher aimed: (a) to

identify the extent to which employees' perceptions of leadership support for health

promotion were related to organizational health climate, (b) identify the extent to which

employees' perceptions of leadership support for health promotion were associated with

employee work and health behaviors, (c) identify the extent to which organizational

health climate was associated with employee work and health behaviors, and (d)

determine how much variance in employee work and health behaviors is explained by

employees' perceptions of leadership support for health promotion and organizational

health climate.

Data were collected from employees at four organizations in the one state in the

southeast United States. Respondents were surveyed regarding: (a) leadership support for

health promotion, (b) organizational health climate, (c) health and work behaviors, and

(d) demographic data. The researcher used correlation and multiple regression analysis

to answer the four research questions and better understand the influence of leadership

support for health promotion and organizational health climate on employee work and health behaviors. Results of these analyses are presented below.

Scale Validation

Prior to data collection, the researcher ensured the validity, reliability, and readability of the scale through a series of pretests. First, the researcher sent the survey to a panel of five experts, including human resource managers and wellness coordinators. The panel of experts was given a brief explanation of the study and asked to take the survey online to review the survey for validity and readability. Feedback from the panel of experts was assessed, and changes were made to the item wording for the Leading by Example instrument to make the items more readable among all employee levels, and N/A response options were added to items relating to health behavior (i.e., smoking). In addition, the engagement scale was shortened based on multiple complaints about the redundancy and length of the 18-item engagement scale.

Next, a pilot study was conducted to evaluate readability and amount of time required to complete the modified survey. The survey was emailed to 33 adults employed in industries that resembled the participant organizations (i.e., higher education, manufacturing, utilities, banking or finance), and 24 useable surveys were completed. The reliability of the scales were not evaluated at this time as the sample size was too small (Stevens, 2002). It was determined that the survey took 15-20 minutes to complete, and no further comments were received regarding readability. The complete survey can be found in Appendix A.

Descriptive Statistics

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Results of the online survey ($n = 621$) were downloaded from Survey Monkey into Statistical Package for the Social Sciences (SPSS) version 21 for Mac. The results from the paper surveys were hand-entered into the SPSS data file. Then the overall data were examined for incomplete responses and three were found ($n = 618$). The sample size exceeded the threshold of 270 recommended by Stevens (2002), and was one survey response under the recommend sample size ($n = 619$) based on the power calculation (Hinkle et al., 2003). Descriptive statistics were performed on all the data to identify responses that needed to be deleted, and none were found.

Description of Population

Participants in this study were solicited from four organizations in the one state in the southeast United States: a bank, a private university, a wholesale supplier, and a public university. These companies were of different size (see Table 3), and each had a different start date (ranging from 5 to 17 years in operation) and different wellness program offerings in place for their employees. The Human Resource Manager or Wellness Coordinator at three of the organizations (the bank, the wholesale supplier, and the private university) was sent an email with the pre-notification, notification with link to the web-based survey, and the follow-up reminder (Appendix C), and asked to disseminate these at the specified times to their employees. The wholesale supplier requested the survey also be made available via paper, and seven paper surveys were returned. The public university employees completed the survey in paper form at a benefits open enrollment fair ($n = 76$), or online through a link printed in a weekly e-newsletter disseminated to faculty and staff ($n = 108$). The employees who attended the open enrollment fair generally do not use a computer, so they would not otherwise have

participated. In addition to data collected from the four companies, the pilot study data

were also included in the final dataset as no significant differences were found between

the two groups. Table 3 presents the number of employees by company and the total

resulting study population of 8,002, participation method (paper or electronic), and the

response rate by organization.

Table 3

Population, Participation Method, and Response Rate

Company	No. employees	Paper	Electronic	Total completed	Response rate
Bank	1058	0	294	294	28%
Private University	197	0	67	67	34%
Wholesale Supplier	247	7	42	49	20%
Public University	6737	76	108	184	3%
Pilot study (various)	n/a	0	24	24	n/a
Totals	8002	83	535	618	

Response bias. The researcher conducted analyses between: paper versus

electronic, initial mailing versus reminder mailing, and pilot versus other company

responses to examine for response bias.

Of the 618 surveys completed, 83 (13%) were completed via paper at the

wholesale supplier and at the public university. The other 535 (87%) were completed

electronically. An independent samples *t*-test of the research variables revealed no

statistically significant mean differences between paper and electronic surveys from the

sample at Plumbers Supply Company. However, the independent samples *t*-test of the

research variables revealed a statistically significant difference between the paper and

electronic responses from the sample at the public university on leadership support for

health promotion, organizational health climate, job satisfaction, and intention to turnover

(see Table 4). As the respondents who completed the paper surveys were likely to have

been nonrespondents had they not been given the option to complete the survey by paper,

the researcher retained all the survey responses.

Table 4

Independent Samples t-test Comparing Paper and Electronic Responses from the Public University

Variable	Mailing	Mean	Standard Deviation	t	Degrees of Freedom	Significance
Leadership	paper	3.88	.77	2.77	181	.006**
	electronic	3.55	.81			
Climate	paper	3.58	.67	3.66	182	.000***
	electronic	3.22	.64			
Job Satisfaction	paper	4.23	.78	2.02	170	.045*
	electronic	3.97	.91			
Job Stress	paper	2.32	.83	-1.44	170	.150
	electronic	2.52	.92			
Intention to Turnover	paper	1.70	.80	-3.02	169	.003**
	electronic	2.16	1.08			
Engagement	paper	4.31	.59	.25	169	.801
	electronic	4.29	.63			
Performance	paper	5.80	.74	-.99	163	.323
	electronic	5.91	.76			
Health Behaviors	paper	3.73	.72	1.20	173	.233
	electronic	3.59	.77			
Participation	paper	3.26	1.15	1.11	168	.270
	electronic	3.07	1.06			

Note: *p < .05, **p < .01, ***p < .001

Additionally, of the 511 email surveys (excluding the pilot), 330 (65%) were completed

after the initial e-mailing. The other 181 (35%) were completed after the reminder email.

An independent samples *t*-test of the research variables revealed only one statistically

significant mean difference between the initial and the reminder responses on job stress

(see Table 5). These results indicate that late respondents report having more stress than

do initial respondents. As job stress could preclude someone from responding, this

finding seems to align with the idea that late respondents resemble nonrespondents

(Creswell, 2009). Thus, all respondent surveys were retained and used in the statistical

analysis.

Table 5

Independent Samples t-test Comparing Mailing One (initial) and Two (reminder)

Variable	Mailing	Mean	Standard Deviation	t	Degrees of Freedom	Significance
Leadership	1	3.28	.77	-1.76	507	.08
	2	3.40	.75			
Climate	1	3.43	.60	.39	509	.70
	2	3.41	.60			
Job Satisfaction	1	4.17	.85	1.89	464	.06
	2	4.02	.81			
Job Stress	1	2.45	.82	-2.09	462	.04*
	2	2.62	.87			
Intention to Turnover	1	1.87	.98	-1.81	464	.07
	2	2.04	.98			
Engagement	1	4.24	.60	-.52	464	.60
	2	4.27	.56			
Performance	1	5.80	.67	.61	457	.54
	2	5.76	.77			
Health Behaviors	1	3.25	.83	-1.30	467	.20
	2	3.36	.87			
Participation	1	2.68	1.24	-.87	444	.39
	2	2.78	1.17			

*Note: *p < .05, **p < .01, ***p < .001*

Lastly, in order to increase the sample size to meet the minimum threshold per the power

calculation ($N = 619$), the pilot study and all other company responses were also

subjected to an independent samples *t*-test of the research variables and statistically

significant mean differences were found between the pilot and the other company

responses on leadership and intention to turnover. However, relationships among

variables, which were the focus of this study, were the same among the respondent

groups (pilot, overall sample, paper and online formats). Therefore, all the respondent

surveys were combined and used in the statistical analysis of this study to increase

statistical power (Hinkle et al., 2003).

Table 6

Independent Samples t-test Comparing Pilot and All Other Organization Responses

Variable	Mailing	Mean	Standard Deviation	t	Degrees of Freedom	Significance
Leadership	pilot	2.80	1.07	-3.67	613	.000***
	other	3.40	.78			
Climate	pilot	3.24	.69	-1.59	616	.11
	other	3.44	.60			
Job Satisfaction	pilot	3.88	.83	-1.46	566	.14
	other	4.13	.83			
Job Stress	pilot	2.71	.86	1.23	563	.22
	other	2.50	.84			
Intention to Turnover	pilot	2.65	1.20	3.74	565	.000***
	other	1.90	.96			
Engagement	pilot	4.08	.74	-1.42	565	.16
	other	4.26	.58			
Performance	pilot	5.96	.81	1.15	554	.25
	other	5.79	.71			
Health Behaviors	pilot	3.45	.83	.54	572	.59
	other	3.35	.84			
Participation	pilot	2.61	1.43	-.62	538	.54
	other	2.80	1.22			

*Note: *p < .05, **p < .01, ***p < .001*

Description of Individual Demographics

A description of the individual employee demographics is presented below.

Sex. Approximately 62% ($n = 382$) of the sample was female, 27% ($n = 169$) of

the sample was male, and 3% ($n = 17$) preferred not to answer. Approximately 8% ($n =$

50) of the sample did not report their sex. The overall population was approximately

56% female and 43% male.

Age. A frequency analysis of age indicated that less than 1% ($n = 1$) of the

respondents reported belonging to the 20 years or less group, 14% ($n = 87$) to the 21-30

group, 20% (n = 124) to the 31-40 group, 19% (n = 117) to the 41-50 group, 26% (n = 161) to the 51-60 group, 10% (n = 60) to the 61-70 group, less than 1% (n = 3) to the 71 years or older group, and 2% (n = 15) preferred not to answer. Approximately 8% (n = 50) of respondents did not report their age.

Years worked at organization. A frequency analysis of years worked for organization indicated 9% (n = 54) of the participants worked less than one year, 29% (n = 177) reported one to five years, 19% (n = 118) reported six to ten years, 13% (n = 79) reported 11 to 15 years, and 22% (n = 135) reported 16 years or more, and 1% (n = 8) preferred not to answer. Approximately 8% (n = 47) of respondents did not report the number of years worked at the organization.

Race/ethnicity. A frequency analysis of ethnicity indicated 1% (n = 6) of respondents were Asian, 3% (n = 17) were Black or African American, 1% (n = 7) were Hispanic or Latino, less than 1% (n = 1) were Native American (not Pacific Islander), less than 1% (n = 2) were Pacific Islander, 83% (n = 515) were White or Caucasian, 1% (n = 7) were Bi-Racial or Multi-Racial, and 3% (n = 16) preferred not to answer. Approximately 8% (n = 47) respondents did not report their race/ethnicity.

Highest level of education completed. A frequency analysis of highest level of education completed indicated 11% (n = 68) of the participant's highest educational attainment was a high school diploma or equivalent, 20% (n = 125) reported some college but no degree, 9% (n = 53) reported earning an Associate's degree, 26% (n = 162) reported earning a Bachelor's degree, 15% (n = 95) reported earning a Master's degree, 8% (n = 49) reported earning a Doctoral degree or professional degree, and 3% (n

= 17) preferred not to answer. Approximately 8% (*n* = 49) of respondents did not report their level of education.

Role. Question six in section three asked respondents to choose a term that best described their role within the organization. A frequency analysis indicated 20% (*n* = 126) were in Administrative/Clerical roles, 2% (*n* = 13) in Executive/Partner roles, 22% (*n* = 139) in Production/Service roles, 21% (*n* = 132) in Professional roles, 7% (*n* = 39) indicated "other", and 7% (*n* = 44) preferred not to answer. Analysis of the open-ended responses for "other" revealed five could be classified as Administrative/Clerical, two could be classified as Executive/Partner, four could be classified as Manager or Supervisor, 18 could be classified as Production/Service, 14 could be classified as Professional, and one (Trainee) could not be further classified (see Appendix D for a complete list). Approximately 11% (*n* = 66) of respondents did not report their role.

Job status. A frequency analysis indicated 89% (*n* = 547) were full-time, 3% (*n* = 16) were part-time, and 1% (*n* = 7) preferred not to answer. Approximately 8% (*n* = 48) of respondents did not report their job status.

Table 7 provides the frequency of all demographic variables examined in this study.

Table 7

Frequency Table of Demographic Variables

Category	Variable	*f*	Percent
Sex	Female	382	61.8
	Male	169	27.3
	Prefer not to answer	17	2.8
	Total	568	91.9
	Missing	50	8.1
Age	20 years old or less	1	.2
	21-30	87	14.1
	31-40	124	20.1

92

	41-50	117	18.9
	51-60	161	26.1
	61-70	60	9.7
	71 years or older	3	.5
	Prefer not to answer	15	2.4
	Total	568	91.9
	Missing	50	8.1
Years worked	Less than one year	54	8.7
	1-5 years	177	28.6
	6-10 years	118	19.1
	11-15 years	79	12.8
	16 years or more	135	21.8
	Prefer not to answer	8	1.3
	Total	572	92.4
	Missing	47	7.6
Race/Ethnicity	Asian	6	1.0
	Black or African American	17	2.8
	Hispanic or Latino	7	1.1
	Native American (not Pacific Islander)	1	.2
	Pacific Islander	2	.3
	White or Caucasian	515	83.3
	Bi-Racial or Multi-Racial	7	1.1
	Prefer not to answer	16	2.6
	Total	571	92.4
	Missing	47	7.6
Education	High school or equivalent	68	11.0
	Some college but no degree	126	20.2
	Associate degree	53	8.6
	Bachelor degree	162	26.2
	Master degree	95	15.4
	Doctoral degree or professional degree	49	7.9
	Prefer not to answer	17	2.8
	Total	569	92.1
	Missing	49	7.9
Role	Administrative/Clerical	126	20.4
	Executive/Partner	13	2.1
	Manger or Supervisor	139	22.5
	Production/Service	58	9.4
	Professional	132	21.4
	Prefer not to answer	44	7.1

	Other	39	6.3
	Total	552	89.3
	Missing	66	10.7
Job status	Full-time	547	88.5
	Part-time	16	2.6
	Prefer not to answer	7	1.1
	Total	570	92.2
	Missing	48	7.8

Scale Measures

The Leading by Example (LBE) instrument (Della et al., 2008) and Lifegain

Health Culture Audit© (Lifegain©) (Allen, 2008) have never been studied together, and

as put forth by DeJoy et al. (2009) both had measures of leadership and climate.

Therefore, before proceeding with the data analysis, a factor analysis was performed, as it

was important to verify what each scale was measuring. The data collected using the

LBE and Lifegain© were subjected to two tests to determine if exploratory factor

analysis could be performed. The Kaiser-Meyer-Olkin (KMO) measure of sampling

adequacy is used to determine if the data is suitable for factor analysis. The closer the

value is to 1.00 the better, and values above .60 are considered "good" (Stevens, 2002).

The KMO was .954, which confirmed factor analysis could be performed on the data set.

Bartlett's test of sphericity, which is a test of the null hypothesis that the correlation

matrix is an identity matrix (Stevens, 2002) was rejected ($p = .000$). Principal component

analysis was used with Varimax rotation. Nine factors that, taken together, account for

65% of the variance in the employee perceptions of health climate.

In support of Della et al. (2008) findings, the LBE items loaded heavily on one

factor (e.g., "Supporting employee wellness is among the top priorities in this

organization as a whole."), all measuring leadership support for health promotion as

shown in Table 8. In addition, three of the Lifegain© items also loaded on the leadership

factor. Cronbach's alpha, a measure of internal consistency (Stevens, 2002), supported

that all of these items are measuring leadership support for health promotion (α = .96). A

Cronbach's alpha score with a value of .70 or higher is needed to ensure the reliability of

the instrument to measure the construct (Nunnally & Bernstein, 1994).

Table 8

Factor Analysis of All LBE and Lifegain© Items

Item		Factors							
	1	2	3	4	5	6	7	8	9
LBE16. Overall, [Organization name] promotes a culture of health and well-being.	**.782**								
LBE1. I believe [Organization name] provides its leadership training on the importance of employee health.	**.557**							.433	
LBE2. All levels of management at [Organization name] are educated regarding the link between employee health and productivity and cost management.	**.515**								
LBE9. I am offered incentives to stay healthy, reduce my high-risk behavior, and/or practice a healthy lifestyle.	**.595**								
LBE20. [Organization name]'s leadership shares information with all employees about the effect of employee health on overall organizational success.	**.637**								
Lifegain22. The use of time, company facilities, money, and other resources demonstrates our organization's commitment to employee health.	**.689**								
Lifegain23. Healthy lifestyles are supported by aspects of the physical work environment, such as available food choices, accessible stairways, changing rooms, and bike racks.	**.592**								
LBE24. [Organization name]'s leadership is taking direct steps to positively impact employee health.	**.836**								
LBE1. [Organization name]'s overall goals and plans support the improvement of employee health.	**.860**								
Lifegain2. Supporting employee wellness is among the top priorities in this organization as a whole.	**.850**								
LBE3. [Organization name]'s health and wellness programs support the overall goals of the organization.	**.838**								
LBE4. There are annual health improvement goals set by [Organization name]'s leadership.	**.694**								
LBE5. [Organization name] offers a work environment that promotes employee health.	**.766**								
LBE6. My health benefits and insurance programs support prevention and health promotion.	**.561**								
LBE7. [Organization name]'s leaders view the level of employee health and well-being as an important indicator of the organization's success.	**.772**								
LBE6. [Organization name] offers programs and services that help me practice good health behavior.	**.602**								
Lifegain8. Living a healthy lifestyle is highly valued in our workgroup. (moved to factor 2 as better fit)	.488	**.429**							
LBE7. My workgroup provides support for participation in health promotion programs.		**.581**							
Lifegain5. In my workgroup, people are taught skills needed to achieve a healthy lifestyle.		**.568**							
Lifegain8. In my workgroup, people are rewarded and recognized for efforts to live a healthy lifestyle.		**.706**							
Lifegain10. In my workgroup, participation in healthy activities is a primary way to renew friendships and to meet new people.		**.646**							
Lifegain13. New employees in my workgroup tend to support wellness.		**.516**							
Lifegain14. New employees in my workgroup are made aware of the organization's support for healthy lifestyles.	.499	**.548**							
Lifegain15. In my workgroup, we have one or more traditions or rituals that symbolize our commitment to healthy lifestyles.		**.733**							
Lifegain16. In my workgroup, traditions and celebrations have been adjusted so that they are consistent with supporting healthy lifestyles.		**.750**							
Lifegain17. In my workgroup, people are made aware of wellness programs and resources that are available.	.426	**.525**							
LIfegain18. In my workgroup, people regularly assess how they are doing in terms of living a healthy lifestyle.		**.657**							
Lifegain19. Managers model a healthy lifestyle.		**.468**							
Lifegain21. Work-related social activities are healthy activities.		**.453**							
Lifegain11. In my workgroup, there is no such thing as being too health-oriented (for example, healthy behaviors such as stress management, exercise and healthy eating are almost never made fun of or discouraged).		**.553**							

Item	F1	F2	F3	F4	F5	F6
Lifegain1. Celebrate accomplishments.	.664					
Lifegain4. Form and maintain friendships at work.	.461					
Lifegain2. Treat all people with respect and fairness, regardless of sex, age, race, disability or sexual orientation.	.643					
Lifegain13. In my workgroup, we have a sense of community (for example, people really get to know one another, feel as if they belong, and care for one another in times of need.)	.791					
Lifegain14. In my workgroup, we have a shared vision (for example, we are inspired by what we are trying to achieve, we feel that the organization's conduct is consistent with our personal values, and we are clear about our role in the success of the organization	.776					
Lifegain15. In my workgroup, there is positive outlook (for example, we enjoy our work, celebrate accomplishments, adopt a "we can do it" attitude and bring out the best in each other).	.789					
Lifegain12. Drink alcohol moderately, if at all (that is, not more than 14 drinks per week or more than 3 drinks on a single day).		.623				
Lifegain13. Get help with alcohol or other drug problems early on.		.636				
Lifegain14. Not smoke.		.647				
Lifegain15. Drive safely.		.657				
Lifegain16. Organize work to avoid injury (addressing such issues as office layout, lighting and safety gear).		.473				
Lifegain7. Practice some form of stress management technique (such as yoga, meditation or prayer).			.532	.413		
Lifegain8. Be physically active (such as taking a brisk walk for at least 30 minutes most days).			.624			
Lifegain9. Not eat or drink too much at work-related social events and meetings.			.518			
Lifegain10. Eat amounts of food that help maintain a healthy weight.			.753			
Lifegain11. Eat foods that are low in fat and refined sugar and high in whole grains, fruits and vegetables.			.754			
Lifegain3. Not come to work sick.				.584		
Lifegain5. Come to work rested.				.710		
Lifegain6. Achieve a balance between work, rest, and play.				.654		
Lifegain9. My immediate supervisor supports employees' efforts to adopt healthier lifestyle practices.					.448	
Lifegain10. My immediate coworkers support one another's efforts to adopt healthier lifestyle practices.			.476		.541	
Lifegain11. My close friends (at work and outside of work) support one another's efforts to adopt healthier lifestyle practices.					.848	
LBE3. I am educated about the impact a healthy workforce can have on productivity and cost management.						.759
LBE4. I am educated about the true cost of health care and its effects on organizational success.						.765
Lifegain12. In my workgroup, unhealthy practices such as overworking are almost never praised or rewarded.						.520

Note. Factor loadings < .4 are suppressed

Lifegain items from the Lifegain Health Culture Audit© (Allen, 2008)

The remaining items from Lifegain©, along with three LBE items (e.g., "My workgroup provides support for participation in health promotion programs."), loaded on the other eight factors as shown in Table 8. One Lifegain© item loaded on a factor by itself ("In my workgroup, unhealthy practices such as overworking are almost never praised or rewarded"), and it was determined that this item would be eliminated from the analysis. Additionally, two LBE items related to education loaded on a factor, and they were also eliminated from the analysis. One LBE item related to workgroup support was retained, as it loaded with the Lifegain© items related to workgroup norms. The remaining six factor loadings were similar to the findings from the short-form of Lifegain© reported by Golaszewski et al. (2008) reported by Golaszewski et al. (2008) and the intent of Lifegain© (Allen, 2008). Each produced a six-factor solution; however, the additional items produced different factors. The factors could be called policies and procedures (or workgroup norms), climate, general health norms, exercise and diet norms, values, and support. In line with previous research, and for the purpose of answering the research questions in this study, all the remaining items on the six factors were used as the measure of organizational health climate (α = .96).

The two items measuring respondents' usual and overall rating of their job performance were combined into a scale called performance (α = .91).

The eight health behavior items from Lifegain© and the overall measure of health item were subject to tests to determine if they could be used as a scale. As stop smoking and address alcohol or other drug abuse problems had very low response rates (n = 79 and n = 49, respectively), they were not included in the analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was .815, which confirmed factor analysis could be

performed on the dataset. Bartlett's test of sphericity, which is a test of the null

hypothesis that the correlation matrix is an identity matrix (Stevens, 2002) was rejected

($p = .000$). Principal component analysis was used with Varimax rotation. Only one

factor was found, so a health behavior scale was created using the seven items together

($\alpha = .86$).

Lastly, wellness program participation items were generated for this study. The

data collected using the seven participation items were subjected to two tests to determine

if exploratory factor analysis could be performed. The Kaiser-Meyer-Olkin measure of

sampling adequacy was .848, which confirmed factor analysis could be performed on the

dataset. Bartlett's test of sphericity, which is a test of the null hypothesis that the

correlation matrix is an identity matrix (Stevens, 2002) was rejected ($p = .000$). Principal

component analysis was used with Varimax rotation. Only one factor was found, so an

overall participation in wellness activities scale was created using the seven items

together ($\alpha = .86$).

In addition, scales from previous studies were used to collect data regarding job

satisfaction, job stress, intention to turnover, and employee engagement. Cronbach's

alpha, a measure of internal consistency (Stevens, 2002), was evaluated for all scale

measures with multiple Likert-scaled items and are reported in Table 9.

Table 9

Cronbach's Alphas of Research Measures

Scale	α
Leadership Support for Health Promotion	.96
Organizational Health Climate	.96
Job Satisfaction	.87
Job Stress	.88
Intention to Turnover	.82
Employee Engagement	.85

Performance	.91
Health Behaviors	.82
Participation in Wellness Activities	.86

As shown in Table 9, all scale measures in the study had acceptable reliability indices of .82 or above.

Assumptions

Prior to running the correlation and regression analysis, an exanimation of the underlying assumptions was conducted. For the correlation analysis, the bivariate scatter plots were reviewed for linear relationships between the *x* and *y* variables. For the regression analysis, the assumptions examined were outliers, normality of residuals, homoscedasticity, linearity, and collinearity (Pedhazur, 1997). Once the assumptions were met, simultaneous regressions were run to determine if any relationships existed among the variables.

Correlation assumption of linearity. Each bivariate correlation was graphed on a scatterplot to evaluate the linearity of the relationship. All the correlations were found to meet the assumption of linearity. However, the following variables presented some homogeneity within this data set: job satisfaction, intention to turnover, and performance.

Regression assumptions. Prior to analyzing each regression equation, the variables of interest were evaluated to be sure that they met appropriate statistical assumptions. Variables were evaluated for outliers, normality of residuals, linearity, homoscedasticity, and collinearity (Pedhazur, 1997). A discussion of each assumption for each variable is presented below. Once the assumptions were verified then the simultaneous regression analysis was conducted.

Data Analysis

Four research questions were developed based on the framework in Figure 2, which guided this exploratory study.
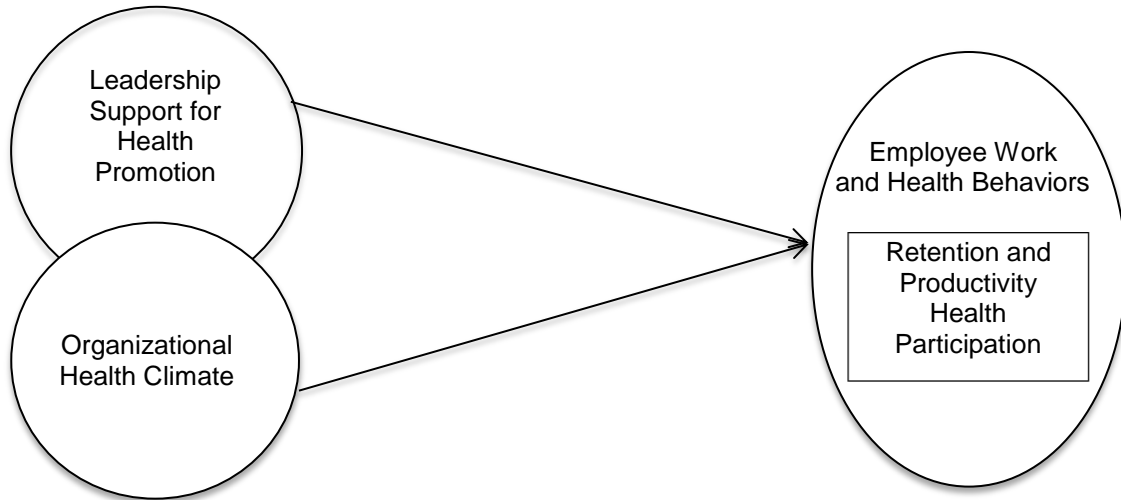

Figure 2.　　　Proposed conceptual framework for the present study.

The following section discusses the statistical analyses conducted to answer the research questions.

Research Question 1

RQ1: To what extent is there a relationship between employees' perceptions of leadership support for health promotion and organizational health climate?

The researcher used correlation analysis to determine the extent and direction of the relationship between employees' perceptions of leadership support for health promotion and organizational health climate. The means, standard deviations, and correlations among the primary variables are reported in Table 10.

As shown in Table 10, the correlation between employees' perceptions of leadership support for health promotion and organizational health climate was

statistically significant at $r = .68$ ($p < .01$). Therefore, the hypothesis that leadership support would be positively associated with organizational health climate was supported.

Hinkle et al. (2003) presented the following guidelines for interpretation of the size of the correlation as absolute value of: .00 to .30 is little if any correlation, .30 to .50 low correlation, .50 to .70 moderate correlation, .70 to .90 high correlation, and .90 to 1.0 very high correlation. Additionally, the coefficient of determination can be calculated by squaring the correlations coefficient (r^2), which provides the proportion of the total variance in Y associated with the variance in X. Cohen et al. (2003) calls this the effect size and categorized the effect size as: $r^2, R^2 = .01-.08$ as small, $r^2, R^2 = .09-.24$ as medium, and $r^2, R^2 > .24$ as large. The statistically significant correlation between leadership support for health promotion and organizational health climate (+) was found to be moderate (Hinkle et al., 2003), with a large effect size ($r^2 = .462$) (Cohen et al., 2003). This suggests that 46.2% of the variance in leadership support for health promotion is associated with organizational health climate.

Table 10

Correlation Matrix

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1 Leadership Support[a]	3.38	.80	(.96)								
2 Org. Health Climate[b]	3.43	.61	.68**	(.96)							
3 Participation[c]	2.79	1.23	.35**	.26**	(.86)						
4 Job Satisfaction[d]	4.12	.83	.33**	.46**	.15**	(.87)					
5 Job Stress[e]	2.50	.84	-.32**	-.36**	-.07	-.51**	(.88)				
6 Intention to Turnover[f]	1.93	.98	-.34**	-.36**	-.13**	-.76**	.47**	(.82)			
7 Engagement[g]	4.25	.59	.28**	.32**	.14**	.55**	-.21**	-.47**	(.85)		
8 Performance[h]	5.80	.71	.17**	.20**	.18**	.24**	-.26**	-.22**	.43**	(.91)	
9 Health Behaviors[i]	3.35	.84	.32**	.30**	.36**	.24**	-.33**	-.19**	.25**	.29**	(.82)

Note: *$p < .05$, **$p < .01$, ***$p < .001$
The mean of the variables with multiple items was calculated, after verifying the internal consistency reliability coefficients.
Parenthetical values on the diagonal represent the internal consistency reliability coefficients.
[a]Employee perception of Leadership Support for Health Promotion was rated on a 1-5 Likert-type scale, with 1 = Disagree Strongly and 5 = Agree Strongly.
[b]Employee perception of Organizational Health Climate was rated on a 1-5 Likert-type scale, with 1 = Disagree Strongly and 5 = Agree Strongly.
[c]Participation in Wellness Activities was rated on a 1-5 Likert-type scale, with 1= Not at all and 5 = To a great extent.
[d]Job Satisfaction was rated on a 1-5 Likert-type scale, with1 = Disagree Strongly and 5 = Agree Strongly.
[e]Job Stress was rated on a 1-5 Likert-type scale, with 1 = Never and 5 = Very Often.
[f]Intention to Turnover was rated on a 1-5 Likert-type scale, with 1 = Disagree Strongly and 5 = Agree Strongly.
[g]Employee Engagement was rated on a 1-5 Likert-type scale, with 1 = Disagree Strongly and 5 = Agree Strongly.
[h]Performance was rated on a 1-7 Likert-type scale, with 1 = Worst Performance and 7 = Top Performance.
[i]Health Behaviors was rated on a 1-5 Likert-type scale, with 1 = Not at All Successful and 5 = Very Successful; and the overall health item was on a 1-5 Likert-type scale, with 1= Extremely Poor and 5 = Excellent.

Research Question 2

> *RQ2: To what extent is there a relationship between employees' perceptions of*
>
> *leadership support for health promotion and employee work and health*
>
> *behaviors?*

The researcher used correlation analysis to determine the extent and direction of

the relationship between employees' perceptions of leadership support for health

promotion and employee work (job satisfaction, job stress, intention to turnover,

employee engagement, and performance) and health behaviors. As shown in Table 10,

the correlation between employees' perceptions of leadership support for health

promotion and job satisfaction was statistically significant at $r = .33$ ($p < .01$), job stress

was at $r = -.32$ ($p < .01$), intention to turnover was at $r = -.34$ ($p < .01$), and employee

engagement was at $r = .28$ ($p < .01$). The correlation between employees' perceptions of

leadership support for health promotion and health behaviors was statistically significant

at $r = .21$ ($p < .01$), as was the correlation between leadership support for health

promotion and participation in wellness activities at $r = .35$ ($p < .01$); therefore, the

hypothesis that leadership support would be positively associated with employee health

behaviors and participation in wellness activities was supported.

The statistically significant correlations between leadership support for health

promotion and job satisfaction (+), job stress (-), intention to turnover (-), and

participation in wellness activities (+) were found to be low, with a medium effect size (r^2

$= .102 - .123$). This suggests that between 10.2% and 12.3% of the variance in job

satisfaction, job stress, intention to turnover, and participation in wellness activities were

associated with leadership support for health promotion. Additionally, the statistically

significant correlations between leadership support for health promotion and health behaviors (+) and employee engagement (+) were found to be little if any, with a small effect size (r^2 = .044 and .078 respectively) (Cohen et al., 2003).

Research Question 3

RQ3: To what extent is there a relationship between organizational health climate and employee work and health behaviors?

The researcher used correlation analysis to determine the extent and direction of the relationship between organizational health climate and employee work (job satisfaction, job stress, intention to turnover, employee engagement, and performance) and health behaviors. As shown in Table 10, the correlation between organizational health climate and job satisfaction was statistically significant at r =.46 (p < .01); therefore, the hypothesis that organizational health climate would be positively associated with employee job satisfaction was supported. The correlation between organizational health climate and job stress was statistically significant at r =-.36 (p < .01); therefore, the hypothesis that organizational health climate would be negatively associated with job stress was supported. The correlation between intention to turnover was statistically significant at r = -.36 (p < .01), and employee engagement was at r =.32 (p < .01). The correlation between organizational health climate and health behaviors was statistically significant at r =.30 (p < .01), as was the correlation between organizational health climate and participation in wellness activities at r =.26 (p < .01); therefore, the hypothesis that organizational health climate would be positively associated with health behaviors and participation in wellness activities was supported.

The statistically significant correlation between organizational health climate and job satisfaction (+), job stress (-), intention to turnover (-), employee engagement (+), and health behaviors (+) were found to be low, with a medium effect size (r^2 = .09 - .212) (Cohen et al., 2003). This suggests that between 9.0% and 21.2% of the variance in job satisfaction, job stress, intention to turnover, and participation in wellness activities was associated with organizational health climate. Additionally, the statistically significant correlation between organizational health climate and participation in wellness activities was found to have a relatively small effect size (r^2 = .068) (Cohen et al., 2003).

Research Question 4

RQ4: To what extent do employees' perceptions of leadership support for health promotion and organizational health climate explain variance in employee work and health behaviors?

The researcher used a series of multiple regression equations to examine the amount of variance in employee work and health behaviors explained by employees' perceptions of leadership support for health promotion and organizational health climate. Each employee health and work behavior measure (job satisfaction, job stress, intention to turnover, employee engagement, performance, health behavior, and participation in wellness activities) was entered with the predictor variables (leadership support for health promotion and organizational health climate) in separate simultaneous regression analyses. As multiple analyses were being used, a Bonferroni adjustment was used to control for alpha inflation (i.e., Type I error) (Pedhazur, 1997). The adjusted alpha level was set at .007 (i.e., $p/7$ or $.05/7 = .007$).

Prior to analyzing each regression equation, the following assumptions were examined: linearity, homoscedasticity, normality of residuals, collinearity, and outliers (Pedhazur, 1997; Stevens, 2002). To check for linearity and homoscedasticity the researcher examined residual plots. The residual plots displayed generally random scatter around zero, fulfilling the assumptions of linearity and homoscedasticity. To check normality of residuals, the researcher examined histograms of the residuals for each criterion variable with an overlay of a normal curve and normal probability plots (i.e., standardized residuals compared with the normal distribution). The histograms displayed more-or-less bell shaped curves for all the variables, and the dots on the normal probability plots more-or-less follow the straight diagonal line, thus fulfilling the assumption of normality of residuals. The variance inflation factor (VIF) and tolerance statistics were examined to ensure the assumption of multicollinearity was met. Results yielded VIF values ranging from 1.71 to 1.85, which are below the threshold value of 10 (Stevens, 2002). Tolerance results ranged from .54 to .58, which are above the recommended .10 (Stevens, 2002). Thus, the assumption of multicollinearity was met. Lastly, the researcher examined the dataset for outliers on each variable. Tests for outliers were conducted using Cook's Distance, centered leverage value, and standardized residuals (Pedhazur, 1997). Cook's Distance seeks to identify influential cases, and is affected by both predictors and the dependent variable. If a case is > 1.00, it is deemed influential, so it should be looked at to determine if the case should be deleted (Stevens, 2002). No cases were found. Centered leverage value measures cases that are outliers on the predictors. If a case exceeds a threshold value it is an outlier (threshold is equal to $3(k+1)/n$, where k = number of predictors in the final regression equation, and n

= number of subjects) (Stevens, 2002). The threshold for job satisfaction was 3(2+1)/568 = .015. One case was found and removed from the analysis. The threshold for job stress was 3(2+1)/565 = .016. One case was found and removed from the analysis. The threshold for intention to turnover was 3(2+1)/567 = .015. One case was found and removed from the analysis. The threshold for employee engagement was 3(2+1)/567 = .015. One case was found and removed from the analysis. The threshold for performance was 3(2+1)/556 = .016. No cases were found. The threshold for health behavior was 3(2+1)/574 = .015. One case was found and removed from the analysis. The threshold for participation in wellness activities was 3(1+1)/540 = .011. Five cases were found and removed from the analysis. The final check for outliers was done using the standardized residuals. Standardized residuals measures outliers on the predicted scores *y* (Stevens, 2002), and are the z score version of residuals. Assuming the model is correct, the standardized residuals have a normal distribution with a mean of 0 and a standard deviation of 1. Thus 95% of the standardized residuals should lie within two standard deviations of the mean, so scores that have an absolute value greater than 2 might be examined (Pedhazur, 1997). Additionally, 99% of the standardized residuals should lie within three standard deviations of the mean, so absolute values greater than 3 are considered unusual and should be carefully examined (Stevens, 2002). While some cases were found to exceed the absolute value of 2, all cases were examined and retained. Three cases were found when looking at job stress that exceeded the absolute value of 3, and they were removed from the analysis. Four cases were found when looking at intention to turnover that exceeded the absolute value of 3, and they were removed from the analysis. Two cases were found when looking at performance that exceeded the

absolute value of 3, and they were removed from the analysis. One case was found when looking at health behaviors that exceeded the absolute value of 3, and it was removed from the analysis. After checking the assumptions, the researcher conducted a series of seven simultaneous regression equations.

In the first multiple regression equation the researcher used job satisfaction as the criterion variable and leadership support for health promotion and organizational health climate as the predictor variables. The regression model was statistically significant $[F(2,564) = 76.31, p < .001]$. Results yielded an R^2 value of .213, indicating 21.3% of the variance in job satisfaction being accounted for by organizational climate and leadership support. As shown in Table 10, standardized regression coefficients indicated only organizational health climate ($\beta = .44, t = 8.73, p < .001$) was statistically significant. Leadership support for health promotion was not statistically significant ($\beta = .03, t = .59, p = .56$). Results indicated organizational health climate predicted job satisfaction. Further indicating, for every one unit increase in organizational health climate, job satisfaction increased .44 units.

Table 11

Summary of Regression Analyses

	R^2	B	SE B	β	t	p
Job Satisfaction	.213**					
Leadership[a]		.03	.05	.03	.59	.56
Climate[b]		.61	.07	.44	8.73	.000**
Job Stress	.156**					
Leadership[a]		-.11	.05	-.11	-2.10	.036
Climate[b]		-.43	.07	-.31	-5.90	.000**
Intention to Turnover	.165**					
Leadership[a]		-.21	.06	-.18	-3.37	.001*

Climate[b]		-.42	.08	-.27	-5.14	.000**
Employee Engagement	.111**					
Leadership[a]		.08	.04	.11	2.11	.036
Climate[b]		.24	.05	.25	4.64	.000**
Performance	.042**					
Leadership[a]		.09	.05	.10	1.79	.074
Climate[b]		.15	.07	.12	2.21	.027
Health Behaviors	.122**					
Leadership[a]		.22	.06	.22	4.05	.000**
Climate[b]		.23	.07	.17	3.15	.002*
Participation in Wellness Activities	.112**					
Leadership[a]		.46	.08	.30	5.54	.000**
Climate[b]		.12	.11	.06	1.04	.297

Adjusted R^2: Job Satisfaction (.210), Job Stress (.153), Intention to Turnover (.162), Employee Engagement (.108), Performance (.038), Health Behaviors (.119), Participation in Wellness Activities (.109)
*$p < .007$ (Bonferonni adjustment); **$p < .001$
[a]Employees' perceptions of Leadership Support for Health Promotion
[b]Employees' perceptions of Organizational Health Climate

Job stress was the criterion variable in the second multiple regression equation

and leadership support for health promotion and organizational health climate as the

predictor variables. The regression model was statistically significant [$F(2,558) = 51.75$,

$p < .001$]. Results yielded an R^2 value of .156, indicating 15.6% of the variance in job

stress being accounted for by organizational climate and leadership support. As shown in

Table 11, standardized regression coefficients indicated only organizational health

climate ($\beta = -.31$, $t = -5.90$, $p < .001$) was statistically significant. Leadership support for

health promotion was not statistically significant ($\beta = -.11$, $t = -2.10$, $p = .04$). Results

indicated organizational health climate predicted job stress. Further indicating, for every

one unit increase in organizational health climate, job stress decreased .31 units.

In the third multiple regression equation, intention to turnover was the criterion and leadership support for health promotion and organizational health climate were the predictor variables. The regression model was statistically significant [$F(2,559) = 55.03$, $p < .001$]. Results yielded an R^2 value of .165, indicating 16.5% of the variance in intention to turnover being accounted for by organizational climate and leadership support. As shown in Table 11, standardized regression coefficients indicated only organizational health climate ($\beta = -.27$, $t = -5.14$, $p < .001$) was statistically significant. Leadership support for health promotion was not statistically significant ($\beta = -.18$, $t = -3.37$, $p = .001$). Results indicated organizational health climate predicted intention to turnover. Further indicating, for every one unit increase in organizational health climate, intention to turnover decreased .27 units.

Employee engagement was the criterion in the fourth regression model and leadership support for health promotion and organizational health climate were the predictor variables. The regression model was statistically significant [$F(2,563) = 35.23$, $p < .001$]. Results yielded an R^2 value of .111, indicating 11.1% of the variance in employee engagement being accounted for by organizational climate and leadership support. As shown in Table 11, standardized regression coefficients indicated only organizational health climate ($\beta = .24$, $t = 4.64$, $p < .001$) was statistically significant. Leadership support for health promotion was not statistically significant ($\beta = .11$, $t = 2.11$, $p = .036$). Results indicated organizational health climate predicted employee engagement. Further indicating, for every one unit increase in organizational health climate, employee engagement increased .24 units.

In the fifth regression model performance was the criterion variable and leadership support for health promotion and organizational health climate were the predictor variables. The regression model was statistically significant [$F(2,551) = 12.00$, $p < .001$]. Results yielded an R^2 value of .042, indicating 4.2% of the variance in performance being accounted for by organizational climate and leadership support. As shown in Table 11, standardized regression coefficients were not statistically significant for organizational health climate ($\beta = .12$, $t = 2.21$, $p = .027$), or for leadership support for health promotion ($\beta = .10$, $t = 1.79$, $p = .074$).

Health behaviors were the criterion in the sixth regression model and leadership support for health promotion and organizational health climate were the predictor variables. The regression model was statistically significant [$F(2,569) = 39.57$, $p < .001$]. Results yielded an R^2 value of .122, indicating 12.2% of the variance in health behaviors being accounted for by organizational climate and leadership support. As shown in Table 11, standardized regression coefficients indicated both organizational health climate ($\beta = .23$, $t = 3.15$, $p < .007$), and leadership support for health promotion were statistically significant ($\beta = .22$, $t = 4.05$, $p < .001$). Results indicated organizational health climate and leadership support for health promotion predicted employee engagement. Further indicating, for every one unit increase in organizational health climate, employee engagement increased .23 units. In addition, for every one unit increase in leadership support for health promotion, health behaviors increased .22 units.

In the seventh multiple regression equation, participation in wellness activities was the criterion and leadership support for health promotion and organizational health climate were the predictor variables. The regression model was statistically significant

$[F(2,533) = 33.64, p < .001]$. Results yielded an R^2 value of .112, indicating 11.2% of the variance in participation in wellness activities being accounted for by organizational climate and leadership support. As shown in Table 11, standardized regression coefficients indicated only leadership support for health climate ($\beta = .30, t = 5.54, p < .001$) was statistically significant. Organizational health climate was not statistically significant ($\beta = .06, t = 1.04, p = .297$). Results indicated leadership support for health promotion predicted participation in wellness activities. Further indicating, for every one unit increase in leadership support for health promotion, participation in wellness activities increased .30 units.

Summary of Results

This study used correlation and multiple regression analysis to answer the four research questions. There were 618 useable surveys returned with response rates ranging from 3-34% in four organizations. The researcher found that employees reporting higher levels of leadership support for health promotion also reported higher levels of organizational health climate, job satisfaction, employee engagement, performance, health behaviors, and participation in wellness activities. Employee who reported lower levels of leadership support for health promotion also reported higher levels of job stress and higher levels of intention to turnover. The researcher also found that organizational health climate followed the same pattern of relationship with the work and health behaviors. Employees reporting higher levels of organizational health climate also reported higher levels of job satisfaction, employee engagement, performance, health behaviors, and participation in wellness activities. Employees reporting lower levels of

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organizational health climate also reported higher levels of job stress and higher levels of intention to turnover.

More specifically, the leadership support for health promotion as well as organizational health climate were found to be statistically significant predictors of employees' participation in organizational wellness program activities. In turn, employees' participation in organizational wellness program activities was found to be significantly related to job satisfaction, performance, employee engagement, intention to turnover, and positive health behaviors. Together, employees' perceptions of leadership support for health promotion and organizational health climate were found to be statistically significant predictors of employee work and health behaviors. Chapter V presents the discussion and implications of these findings for theory, practice, and future research.

CHAPTER V

DISCUSSION

The purpose of this study was to explore the relationship between employees'
perceptions of leadership support for health promotion, employees' perceptions of
organizational health climate, and employee health and work behaviors. To guide the
research and analysis, the researcher developed four research questions.

RQ1: To what extent is there a relationship between employees' perceptions of
leadership support for health promotion and employees' perceptions of
organizational health climate?

RQ2: To what extent is there a relationship between employees' perceptions of
leadership support for health promotion and employee work and health behaviors?

RQ3: To what extent is there a relationship between employees' perception of
organizational health climate and employee work and health behaviors?

RQ4: To what extent do employees' perceptions of leadership support for health
promotion and employees' perceptions of organizational health climate explain
variance in employee work and health behaviors?

The next section will discuss the results of the study in relation to each research question
(see Chapter IV for the data analysis of the results), and the theoretical and practical

implications of these results. In addition, suggestions for future research and a summary of the entire study will be provided.

Summary of Results

This study used correlation and multiple regression analysis to answer the four research questions. The researcher found that employees who reported higher levels of leadership support for health promotion also reported higher levels of organizational health climate, job satisfaction, employee engagement, performance, positive health behaviors, and participation in wellness activities. In addition, lower levels of perceived leadership support for health promotion were related to higher levels of job stress and intention to turnover.

The researcher likewise found that organizational health climate was related to work and health behaviors. High levels of perceived organizational health climate were associated with high levels of job satisfaction, employee engagement, performance, positive health behaviors, and participation in organizational wellness activities. Lower levels of perceived organizational health climate were associated with greater levels of reported job stress and intention to turnover.

More specifically, employees' perceptions of leadership support for health promotion as well as employees' perceptions of organizational health climate were found to be statistically significant predictors of employees' participation in organizational wellness program activities. In turn, employees' participation in wellness activities was found to be significantly related to job satisfaction, performance, employee engagement, intention to turnover, and positive health behaviors. Together, employees' perceptions of leadership support for health promotion and employees' perceptions of organizational

health climate were found to be statistically significant predictors of positive employee work and health behaviors.

<div align="center">**Theoretical Implications**</div>

The following section will discuss the results of this study as they relate to previous research. This section will discuss theoretical implications in the context of the primary independent variables of leadership support for health promotion and organizational health climate.

Leadership Support for Health Promotion

In relation to the primary focus in the current study on the variable of employees' perceptions of leadership support for health promotion, there were five major contributions of this study: (a) the expanded use of the Leading by Example instrument (LBE) to include all levels of employees rather than just upper-level managers and those involved in wellness programming, (b) the finding that leadership support for health promotion is predictive of participation in wellness activities, (c) the addition of a valid and reliable instrument to measure overall wellness program participation, (d) the support of initial evidence from previous research that employees' perceptions of leadership support for health promotion contributes to employees' successful change in health-related behaviors, and (e) the expansion of the worksite wellness literature to include the influence of employees' perceptions of leadership support for health promotion on employee work behaviors and attitudes (job satisfaction, employee engagement, performance, job stress and intention to turnover).

The study presented here is the first research study to use the LBE instrument in a sample including all employee levels in an organization. Prior to this study all studies

using the LBE instrument confined their study sample to site leadership, health services staff, and members of the employee advisory committees at an organization (DeJoy et al., 2009; DeJoy et al., 2008; Della et al., 2008; Della et al., 2010; Patel et al., 2013). The current study expanded the use of the LBE instrument to include all levels of employees. The inclusion in the present study's participant sample of all levels of employees allowed the researcher to examine the influence of employees' perceptions of leadership support for health promotion on individual employee work and health behaviors. The study findings that employees' perceptions of leadership support for health promotion was related to positive work and health behaviors for employees at all levels was a major contribution of this study to the extant literature on worksite wellness programs as well as employee work behaviors and attitudes. The use of the LBE with employees allowed for the analysis of the relationship between employees' perceptions of leadership support for health promotion and employee participation in organizational wellness program activities.

Participation in wellness activities. Another significant contribution of this study to the extant literature on employee wellness was the investigation of employee participation in wellness activities in relation to employees' perceptions of leadership support for health promotion. Crump et al. (1996) found that white males in management positions were more likely to participate in health programs when there was greater upper-level management support for the programs. The present study also found that employees' perceptions of leadership support for health promotion were associated with greater wellness program participation. The present study extends Crump et al. (1996) findings to all demographic categories of employee participants. The present study found

that employees' perceptions of leadership support for health promotion were related to wellness activity participation for employees of all demographic categories and position levels; in fact, employees' perceptions of leadership support for health promotion accounted for over 11% of the variance in employees' participation in wellness activities.

The findings from the current study add initial evidence that employees' perceptions of leadership support for health promotion is predictive of employee participation in wellness activities. The finding is important because wellness program participation is a widely accepted standard in measuring program success (Goetzel et al., 2007; Terry et al., 2008). An organization can offer the most effective wellness programs, but without attracting the target employee to participate, the program will be ineffective in reaching its goal. Participation rates in wellness program activities have been found to be relatively low overall in most organizations studied (Crump et al., 1996; Shephard et al., 1981), and some study findings indicate wellness programs tend to attract the healthiest employees (Conrad, 1987; Lerman & Shemer, 1996; Lewis, Huebner, & Yarborough III, 1996; Nice & Woodruff, 1990). Identifying the determinants of participation in organizational wellness program activities, especially among the target employee population, would be of great benefit to both researchers and practitioners.

In a systematic literature review on the determinants of employee participation in nutrition and physical activity programs between 1998 and 2007, Robroek, van Lenthe, van Empelen, and Burdorf (2009) found participation rates in wellness activities were generally below 50%, and that women participated at a higher rate for most fitness intervention; the one exception to the gender difference finding was that no difference by sex was found for interventions related to accessing a fitness center. Very few of the 23

extant studies to date on employee participation in wellness activities evaluated the influence of employee health-, lifestyle-, and work-factors on participation in wellness activities (Robroek et al., 2009), and none included employees' perceptions of leadership support for health promotion in the determinants of participation in wellness activities.

One consistent finding related to employee participation in wellness programs is that the use of incentives is related to higher wellness program participation rates (Robroek et al., 2009). For example, incentives have been researched for their influence on participation in a telephonic disease management program (Wilhide et al., 2008), in predicting participation in health risk assessments (Seaverson et al., 2009; Taitel et al., 2008), and in predicting participation in telephonic health coaching programs (Grossmeier, 2013). Overall, incentives have been found to be a statistically significant predictor of wellness program participation. In relation to leadership support, a study by Grossmeier (2013) included in the predictive model of participation in telephonic health coaching programs one question on senior-level support from the HERO Scorecard; however, it was not found to be predictive of enrollment or participation in telephonic health coaching programs. Additionally, there was a study done on participation in an incentive-based smoking cessation program that included top management support, as rated by the interviewer but not the employees (Glasgow, Hollis, Ary, & Lando, 1990), which found top management support to be positively associated with joining the smoking cessation program. In the two studies that included incentives, there were different outcomes for the relationship between participation and leadership support; however, in this study it is clear that leadership support is associated with employee participation in wellness program activities.

The current study adds employees' perceptions of leadership support for health promotion to the array of predictor variables for employee participation in wellness activities. There is no universal definition of participation, and generally researchers investigate specific program participation (e.g., participation in health risk assessments). However, the extant literature abounds with recommendations for comprehensive program design (Goetzel et al., 2007; Terry et al., 2008), so the need for a scale to evaluate overall wellness program participation is warranted. The design of a measure of overall employee participation in wellness activities is thus a major contribution of the present study to further research on this critical variable.

The seven-item scale measuring overall employee wellness program participation designed in the present study was developed based on a review of research on the most common components of a comprehensive worksite wellness program (Goetzel et al., 2007; Mattke et al., 2012; Partnership for Prevention, 2001; Terry et al., 2008), and included an item measuring overall self-reported active participation in wellness activities. As participation in wellness activities is one of the gauges of success in worksite wellness programming, having a valid and reliable instrument to measure overall participation in wellness activities will greatly benefit future research in this area. One of the main goals of employee participation in organizational wellness program activities is improved health-related behavior.

Health-related behaviors. Another major contribution of this study is the support of initial evidence provided by DeJoy et al. (2009) suggesting that employees' perceptions of leadership support for health promotion contribute to employees' successful change in health-related behaviors and outcomes. In the current study,

employees who perceived high levels of leadership support for health promotion also reported higher levels of success in attaining healthier outcomes for all the health behaviors assessed in the study, including losing weight, eating healthier, increasing physical activity, managing stress, improving social relationships, smoking cessation, addressing alcohol and drug problems, and staying current on health screenings.

In addition to health behaviors, the present study examined employees' perceptions of leadership support for health promotion in relation to employee work behaviors and attitudes. The researcher found no prior studies that examined employees' perceptions of leadership support for health promotion in relation to the employee work behaviors and attitudes of job satisfaction, employee engagement, performance, job stress, and intention to turnover. Therefore, this study expanded both the worksite wellness literature and the literature pertaining to employee attitudes and work behaviors to include an examination of the relationship between employees' perceptions of leadership support for health promotion and employee work behaviors and attitudes (job satisfaction, employee engagement, performance, job stress and intention to turnover).

Job satisfaction. Although leadership support for health promotion has not been examined in relation to job satisfaction in the extant literature, there is a long history of job satisfaction research in relation to employee performance and other work-related variables (cf. Bowling & Hammond, 2008; Judge et al., 2001; Wright, 2006). In order to investigate job satisfaction in relation to this study's focal variables of interest, this study used a global measure of job satisfaction as recommended by Judge et al. (2001). In alignment with some findings from previous studies as reported in a meta-analysis by Judge et al. (2001), the present study found a statistically significant positive relationship

between job satisfaction and job performance. This study also replicated the directional relationships between the hypothesized antecedents (organizational health climate, +), the hypothesized correlates (job stress, -) and hypothesized consequences (job performance, +; intention to turnover, -) of job satisfaction in the nomological network proposed by Bowling and Hammond (2008). Moreover, all the correlations of the variables investigated in the present study with job satisfaction were found to be stronger in the present study than those proposed by Bowling and Hammond (2008). In addition to providing more support for the job satisfaction-work variable relationships found in previous studies, the present study expanded on the extensive body of literature pertaining to job satisfaction with the finding that job satisfaction was also positively associated with employees' perceptions of leadership support for health promotion. In fact, employees' perceptions of leadership support for health promotion accounted for over 21% of the variance in employee job satisfaction.

Employee engagement. Another contribution of the present study to extant literature was the investigation of leadership support for health promotion in relation to employee engagement, which is a relationship that has not been conceptually or empirically investigated in previous studies. Conceptual support for the hypothesis that employees' perceptions of leadership support for health promotion may be related to employee engagement can be found in the burgeoning body of literature pertaining to employee engagement (Christian et al., 2011; Crabtree, 2005; Iverson et al., 1998; Martin & Schmidt, 2010; Mester et al., 2003; Rich et al., 2010; Schaufeli, 2012; Schaufeli et al., 2006; Shuck & Herd, 2012; Shuck & Reio, 2013; Shuck, Reio, & Rocco, 2011). This body of literature on employee engagement suggests there are cognitive, affective, and

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behavioral components to the construct of employee engagement (Shuck & Herd, 2012; Shuck & Wollard, 2009), all of which may be influenced by various work, environmental, and personal factors (Shuck & Herd, 2012; Shuck et al., 2011). One such influential factor may be employee health and wellness (Iverson et al., 1998; Schaufeli, 2012; Schaufeli et al., 2006; Shuck & Reio, 2013).

In the present study, successful health behavior change was reported to be higher, as was active participation in wellness activities, among employees who also rated leadership support for health promotion as high. These findings suggest that employees who perceive that their supervisor, workgroup, and organization support healthy choices and active participation in wellness programs are likely to enjoy more physical and mental health (Crabtree, 2005). This increased health may give them more cognitive and physical energy to apply to their work. As well, perceived leadership support for health promotion may engender more positive feelings by employees toward their supervisor and organization in line with social exchange theory (Cropanzano & Mitchell, 2005; Saks, 2006); indeed, it has been suggested by previous research that higher leader-member exchange quality may be associated with increased employee engagement (Settoon, Bennett, & Liden, 1996). The positive benefits of health and well-being, influenced by positive employee's perceptions of leadership support for health promotion, may translate into increased employee engagement. This hypothesized positive relationship between employees' perceptions of leadership support for health promotion and employee engagement was supported in the present study; employees who perceived greater levels of leadership support for health promotion also reported higher levels of engagement.

Performance. Another contribution of the present study to extant literature was the investigation of leadership support for health promotion in relation to employee performance, which is a relationship investigated in previous studies but not operationalized from the employee perception. The measure of productivity in the workplace wellness literature is usually a supervisor report of job performance in comparison with other employees or workgroups (Kuoppala, Lamminpaa, Liira, & Vainio, 2008). Kuoppala et al. (2008) conducted a meta-analysis on what type of leadership (considerate, supportive, or transformational) is associated with job satisfaction, job well-being (psychological symptoms such as exhaustion, anxiety, depression, or work stress), and job performance.

Kuoppala et al. (2008) wanted to measure job performance in terms of employee's perceptions of their own performance and employee's perception of their maximum achievable performance, but as previously mentioned, most research studies use supervisor or manager evaluations. The current study contributes a cross-sectional study using job performance as rated by the employee's perception of their usual and overall job performance. The present study found employees who reported higher levels of leadership support for health promotion also reported higher levels of performance. Unlike the findings reported by Shephard et al. (1981), this study found that employees who reported higher levels of participation in wellness activities also reported higher levels of performance. In the present study, employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate accounted for over 4% of the variance in employee performance.

Job stress. Another work behavior explored in relation to employees' perceptions of leadership support for health promotion was job stress. The researcher found employees who reported lower levels of leadership support for health promotion also reported higher levels of job stress. This finding is consistent with those reported by Clark et al. (2011) where employees who reported higher levels of stress also reported less support. Additionally, Clark et al. (2011) found employees who reported higher levels of stress reported less physical activity, less healthy eating habits, less confidence in their ability to be active, more health problems, more fatigue, and a lower quality of life. Although Clark et al. (2011) looked at support in general, and the present study examined leadership support specifically. However, it seems logical that if job stress is high and an employee's perception of leadership support for health promotion is low, an employee would be less likely to take advantage of the resources that might lower their stress and improve their well-being. However, this study did not find a statistically significant relationship between participation in wellness activities and job stress.

Intention to turnover. In examining the relationship between job stress and intention to turnover, there is some evidence in the organizational leadership literature that not all job stress is bad (Podsakoff, LePine, & LePine, 2007). Challenge stressors are perceived by employees to promote job growth and achievement, while hindrance stressors are perceived by employees to constrain personal development and accomplishment (Podsakoff et al., 2007). In a meta-analysis, Podsakoff et al. (2007) found that the relationship between job stress and intention to turnover was mediated by the effects of job attitudes. The job attitudes reported in the extant literature to be predictive of intention to turnover are job satisfaction and organizational commitment

(Griffeth et al., 2000; Tett & Meyer, 1993). Additionally, perceived supervisor support has been found to contribute to perceived organizational support, and perceived organizational support has been found to mediate the negative relationship between perceived supervisor support and intention to turnover (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Therefore, low satisfaction with supervisor support predicts turnover intentions, and perceived organizational support mediates this relationship. Perhaps, employees' perceptions of leadership support for health promotion is part of the perceived organizational support that mediates intentions to turnover. The researcher found employees who reported lower levels of leadership support for health promotion also reported higher levels of intention to turnover. In turn, those employees who reported higher levels of intention to turnover also reported lower levels of job satisfaction.

In summary, the present study makes several major contributions to the extant literature. The expanded use of the LBE to all levels of employees allowed for the examination of employees' perceptions of leadership support for health promotion on work and health behaviors. The findings that employees' perceptions of leadership support for health promotion is predictive of employee participation in wellness activities, and accounts for 11% of the variance in employee participation in wellness activities was a significant contribution of this study. The present study added a valid and reliable instrument to measure overall employee participation in wellness activities that can be used in future research studies. The support of previous research by DeJoy et al. (2009) that employees' perceptions of leadership support for health promotion contributes to employees' successful health-related behaviors and outcomes was

supported by the present study. The current study expanded the worksite wellness literature to include employee work behaviors and attitudes (job satisfaction, employee engagement, performance, job stress and intention to turnover), and the contribution of empirical findings supporting the relationship between employees' perceptions of leadership support for health promotion and work behaviors and attitudes. The discussion of the theoretical implications of the current study now turns to the other primary independent variable, organizational health climate.

Organizational Health Climate

In relation to the primary focus on the variable of employees' perception of organizational health climate, there were four major contributions of this study to the extant literature: (a) the replication of the statistically significant relationship between employees' perceptions of organizational health climate and job satisfaction and job stress; (b) initial support that employees' perceptions of organizational health climate are predictive of job satisfaction, job stress, and employee engagement; (c) initial evidence that employees' perceptions of organizational health climate contribute to employee successful change in health-related behaviors and active participation in wellness activities; (d) and an additional empirical study in the literature which includes the influence of employees' perceptions of organizational health climate on employee work and health behaviors.

Job satisfaction, job stress, and employee engagement. The finding of a statistically significant positive correlation between employees' perceptions of organizational health climate and job satisfaction and a statistically significant negative correlation between employees' perceptions of organizational health climate and job

stress replicates the findings of Ribisl and Reischl (1993) and Wilson et al. (2004). It also replicates the finding of Bowling and Hammond (2008) in a meta-analysis of a positive correlation between organizational support and job satisfaction. The present study also replicates a statistically significant negative correlation between organizational health climate and job stress as found by Zweber (2012). Interestingly, a slightly larger correlation was found between health-related behavior and performance, as compared to the correlation between job satisfaction and performance which provides some limited support to the idea proposed by Wright (2006) that worker well-being may be a better measure for predicting productivity than job satisfaction.

As mentioned previously in the discussion of employees' perceptions of leadership support for health promotion, this study replicated the directional relationships between the hypothesized antecedents, correlates, and consequences of job satisfaction in the nomonlogical network proposed by Bowling and Hammond (2008), and all the correlations with job satisfaction were found to be stronger in the present study. In addition to the statistically significant relationships between job satisfaction and organizational health climate (+), job stress (-), job performance (-), and intention to turnover (-), the researcher found employees' perceptions of organizational health climate were statistically significant predictors of employee job satisfaction, job stress and employee engagement. It also replicated the findings of Wilson et al. (2004) where job satisfaction was found to have a statistically significant relationship with organizational support (+), job stress (-), general health (+), intention to turnover (-), and where job stress was found to have a statistically significant relationship with organizational support (-), job satisfaction (-), general health (-), and intention to turnover (+).

In fact, this study extended these findings (Bowling & Hammond, 2008; Ribisl & Reischl, 1993; Wilson et al., 2004; Zweber, 2012) by providing initial support that employees' perceptions of organizational health climate are predictive of job satisfaction, job stress, and employee engagement. Employees' perception of organizational health climate accounted for over 21% of the variance in job satisfaction, 16% of variance in job stress, and over 11% of variance in employee engagement. It also extends these findings (Bowling & Hammond, 2008; Ribisl & Reischl, 1993; Wilson et al., 2004; Zweber, 2012) by providing initial evidence that employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate are predictive of intention to turnover and health-related behaviors. Employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate accounted for 17% of the variance in intention to turnover and over 12% of the variance in successful health behavior change.

Health behaviors and participation in wellness activities. The current study provides initial evidence that employees' perceptions of organizational health climate contribute to employee successful change in health-related behaviors and active participation in wellness activities. As noted previously, employees' perceptions of leadership support for health promotion as well as employees' perceptions of organizational health climate were found to be statistically significant predictors of employees' participation in wellness activities. In each of the studies that evaluated health risk assessment participation and incentives mentioned above, there was also a measure for organizational culture (Seaverson et al., 2009) or organizational commitment level (Taitel et al., 2008), which was found to be a significant predictor of participation

along with incentives; however, in both of the aforementioned studies the account manager provided the assessment of the organizational culture and not the employees themselves. Therefore, this study contributes empirical findings assessing employees' perceptions of organizational health climate and its relationship to health-related behaviors and active overall participation in wellness activities.

Grossmeier (2013) included two questions on cultural support in the predictive model of participation in telephonic health coaching programs from the HERO Scorecard. One question asked if the organization had a wellness champion. The other provided a list of seven physical work environment support elements (e.g., smoke-free environment), and asked which are present at the organization. The findings based on these two questions were contrary to the direction expected. Grossmeier (2013) anticipated that organizational culture would have a positive effect on participation in coaching programs; however, Grossmeier found that the likelihood to enroll or actively participate in coaching programs decreased as levels of organizational cultural support for health increased. While Grossmeier (2013) collected data on organizational culture at the individual employee level, unlike Taitel et al. (2008) and Seaverson et al. (2009), the two questions used to assess organizational health culture would be classified as structure factors, or visible organizational characteristics that support employee wellness, according to Golaszewski et al. (2008). The evaluation of employees' perceptions of organizational health climate and employees' perceptions of leadership support for health promotion was a major contribution of this study to the extant literature on worksite wellness programs as well as employee work behaviors and attitudes. Together, employees' perceptions of leadership support for health promotion and employees'

perceptions of organizational health climate were found to be statistically significant predictors of employee work and health behaviors.

Work and health behaviors. There are a limited number of studies examining the relationship between organizational health climate and employee work and health behaviors (Aldana et al., 2012). Ribisl and Reischl (1993) found a relationship between organizational health climate (norms) and employee health behavior (specifically nutrition and exercise). As mentioned above, Ribisl and Reischl (1993) also analyzed job satisfaction and job stress in relation to organizational health climate. Additionally, Wilson et al. (2004) tested a model of a healthy work organization and included both health and well-being scales (employee health, psychological health, health risk behaviors, and attendance behaviors) and psychological work adjustment measures (job satisfaction, organizational commitment, efficacy, and job stress). The current study adds another empirical study to the literature examining the influence of employees' perceptions of organizational health climate on employee health and work behaviors (Aldana et al., 2012; Ribisl & Reischl, 1993; Wilson et al., 2004; Zweber, 2012). The current study found that employees who perceived high levels of healthy climate reported higher levels of participation in wellness activities, greater success with health behavior change, higher levels of job satisfaction, higher levels of employee engagement, and higher levels of performance. Employees who reported low levels of organizational health climate also reported high levels of job stress and high levels of intention to turnover.

The findings from the current study support prior research findings on the relationship between employees' perceptions of leadership support for health promotion,

employees' perceptions of organizational health climate, and employee health and work behaviors (Ribisl & Reischl, 1993; Seaverson et al., 2009; Taitel et al., 2008; Wilson et al., 2004; Zweber, 2012). The current study adds initial support that employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate are predictive of employees' participation in wellness activities. In turn, the researcher found employees' participation in wellness activities to be significantly related to job satisfaction (+), performance (+), employee engagement (+), intention to turnover (-), and positive health behaviors (+). This study provides an additional empirical study in the literature, which includes the influence of employees' perceptions of leadership support for health promotion and employee perceptions of organizational health climate on employees' work and health behaviors.

In summary, the present study makes several major contributions to the extent literature. It replicated prior findings of a statistically significant relationship between organizational health climate and job satisfaction (Bowling & Hammond, 2008; Ribisl & Reischl, 1993; Wilson et al., 2004) and job stress (Wilson et al., 2004; Zweber, 2012), and extended these findings by providing initial evidence that employees' perceptions of organizational health climate and employees' perceptions of leadership support for health promotion were predictive of job satisfaction, job stress, employee engagement, intention to turnover, and employee health behaviors. The assessment of employees' perceptions of organizational health climate and employees' perceptions of leadership support for health promotion allowed for evaluation of their relationship with employee health and work behaviors. The discussion of the results of the present study now shifts to the practical implications of the research results.

Practical Implications

Worksite wellness programs have historically focused on the modification of individual employee behavior (e.g., Shepard, 1981). Scholarly discussion and exploration of the role that the workplace environment plays in influencing individual employee health behavior is a relatively recent development (e.g., Golaszewski et al., 2008). The present study contributes to this scholarly conversation by empirically investigating the relationship between employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate and its impact on employee health-related behaviors and work behaviors and attitudes.

Business executives and wellness program practitioners cannot force employees to participate in wellness activities they offer, nor can they force employees to change their behavior (i.e., increase their exercise or eat healthier). However, they can increase the demonstrated leadership support for health promotion, and they can influence the workplace environment. DeJoy et al. (2009) argue that worksite wellness programs are an important expression of the human resource management strategy, and thus the wellness programs should align with the overall human resource management system and the organizational culture.

The current study found that employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate are key leverage points for employee participation in wellness activities and for employees' successful health behavior change. In the current study, employees' perceptions of leadership support for health promotion were found to be predictive of participation in wellness activities. Leaders may exhibit support for health promotion by frequently

communicating support through all means possible (organizational website, social media, print communication, face-to-face communication, etc.). This communication can be a wellness corner in the monthly newsletter that focuses on different health-related themes each month. The theme would carry over into weekly team meetings with a five-minute focus on the month's theme. Managers and supervisors can be held accountable for covering the monthly topics in team meetings. Leaders can also provide training and development to managers to enhance alignment between wellness goals and manager behavior, attitudes, and action around employee well-being. Additionally, improvements may be made in organizational health climate by ensuring policies and procedures align with the organization's wellness goals, for example having a food policy or guidelines that require healthy options be made available to employees at meetings and lunches, at company sponsored functions, and in the vending machines. Insofar as wellness program participation is an organizational goal, demonstrated leadership support for health promotion and improvements in the organizational health climate should be associated with increased levels of employee participation in wellness activities and increased levels of employee success with health behavior change.

The employee participation in wellness activities and positive health behavior change should translate into reduced health care expenses. While employers and scholars agree that reducing costs is a goal of worksite wellness, there is little consensus on how best to achieve these reductions (Mattke et al., 2012). It may be that by having leadership support for health promotion that can be perceived at the employee level and by having a positive health climate, employers can decrease health care expenses through increased

employee participation in wellness activities and increased levels of success with health behavior change.

Proactive organizational leaders and worksite wellness practitioners interested in increasing participation in wellness activities and employees' successful health behavior change can evaluate the leadership support for health promotion being provided by reviewing: (a) the alignment of business goals with health promotion objectives, (b) the training and education provided to managers and supervisors around the link between health and productivity, (c) the worksite support provided for health promotion, and (d) the promotion and communication of wellness throughout the organization (Della et al., 2008). Leaders and practitioners can evaluate their organizational health climate by reviewing (a) policies and procedures to see if they align with wellness goals; (b) evaluating the current climate to see if it is supportive of healthy behaviors; (c) identifying the general health norms, the exercise and diet norms, and the organizational values to see if they encourage healthy choices; and (d) assessing employees' perceptions of support for healthy behaviors (supervisor, co-worker, friends) (Allen, 2008).

After evaluating leadership support for health promotion and organizational health climate, leaders can use their findings to create goals, trainings, and communication strategies to close the gaps between their current level of leadership support and health climate and their ideal level of leadership support and health climate. In addition to understanding the current situation and the ideal situation, it is important to also create an implementation plan that includes program monitoring and evaluation. A plan should be put into place to assess and report progress back to stakeholders and employees within a predetermined time frame.

Findings from the present study suggest that it is important for developers and managers of health promotion programs to recognize the critical role of employees' perceptions of leadership support for health promotion in employee participation in wellness activities, and to share this relationship with the leaders at all levels of the organization. Working together they can create greater alignment of business goals with wellness goals specific to their organizational needs and culture. For example, most businesses seek to control costs, and the wellness goal that would align with controlling costs might be that healthcare spending will be at half or below national inflation. Evaluating the source of highest expenses in the organization's healthcare plan and designing programs to address those expenses would be the next step. If there are findings indicating a high level of hypertension (high blood pressure), then offer a variety of program activities to employees that target compliance with doctor orders, prescription medication usage, regular access to blood pressure screenings, etc. would help address the high level of hypertension.

The wellness activities should align with the organizational culture, so that leadership, human resources, marketing, and all other stakeholders are sharing the same message to enhance the perceived leadership support for health promotion and the organizational health climate. For example, in a risk-taking culture where organizational success depends on trust, communication, and role modeling, it may be that wellness programs are designed with strong leadership role modeling and incentives for those who attain the desired results to participate in a team building activity that involves the reinforcement of the cultural values of risk-taking (i.e., a team parachute jump). Additionally, there are many human resource techniques and marketing strategies that

can be employed with little to no cost and can enhance the perceptions of leadership support and organizational health climate. Adopting a tobacco free policy, if one does not already exist, or placing signage to encourage the use of stairs with calories burned located on each step are a few examples.

The findings of the present study suggest a relationship between employees' perceptions of leadership support for health promotion and employee participation in wellness activities; however, it is important to remember that correlation does not imply causality. There may be other factors not included in this study that might have influenced the relationships studied. However, for executives, managers, human resource development professionals, and worksite wellness practitioners, the implication is that employees' perceptions of leadership support for health promotion and employees' perceptions of a positive organizational health climate create workplace environments that support employee participation in wellness activities and increase successful health behavior change. There are intuitive reasons to think that employee participation in wellness programs would lead to successful health behavior change, and that perceived leadership support for health promotion would increase the likelihood of participation in wellness activities. If a supervisor expresses the value of eating healthy in team meetings and the organization provides healthy food options at meetings, celebrations, and lunches, employees who are striving to eat healthier are more likely to choose the healthy food options and perceive the alignment in leadership support for health promotion and organizational health climate.

In summary, ensuring the workplace environment is optimized for workers to make the healthy choice could go a long way to increase employee participation in

wellness activities and to increase employee's successful health behavior change, thereby reducing health care costs and producing higher rates of positive work and health behaviors. Human resource managers and operational leaders at all levels of an organization are concerned with job satisfaction, job stress, intention to turnover, employee engagement, performance, health-related behaviors, and overall participation in wellness activities. These are important issues that can be influenced through the creation of a culture of health and well-being, which begins with demonstrated leadership support for health promotion and expands through a supportive organizational health climate to create a workplace environment where the healthy choice is the easy and productive choice for employees. Suggestions for future research to expand the extant knowledge base and extend the study findings follows.

Limitations

This research was limited to the exploration of employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate, and employee self-reported health-related behaviors and work behaviors and attitudes. The sample in this study represented a nonrandom, convenience sample. The unit of analysis was confined to employees at four organizations known to have wellness programs in one state in the southeast United States, who were asked to participate via the human resources manager or the wellness coordinator at their organization. Consequently, the generalizations of the findings are limited to organizations similar to the participant organizations.

Another limitation of this study was the use of a cross-sectional survey design. Data were only collected at one point in time, so it is not possible to show causality.

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Additionally, there may be extraneous or confounding variables not measured in this study that impact employee health-related behaviors and work behaviors and attitudes.

Another methodological limitation of this study was related to the collection of data via survey. Response bias may affect the results (Dillman, 2007; Shadish, Cook, & Campbell, 2002). All employees at each of the organizations were invited to participate; however, each employee self-selected into the sample by completing the survey (Shadish et al., 2002). Those employees that did not respond to the survey are not in the sample. The non-respondents may somehow differ significantly from respondents (Dillman, 2007).

Future Research

The continued convergence of the organizational behavior, management, and human resource development research with the public health research on workplace wellness programs is strongly encouraged in relation to leadership and organizational climate/culture to expand the empirical knowledge base and provide practical information that supports successful wellness program outcomes and positive work behaviors and attitudes. Future research could extend the present study by identifying which leadership style (transformational or transactional) has the most influence on participation in wellness activities, employee health behavior change, and employee work behaviors and attitudes (job satisfaction, job stress, intention to turnover, employee engagement, and performance). Likewise, future studies might explore how the different types of organizational culture (Clan, Adhocracy, Market and Hierarchy), as operationalized by Cameron and Quinn (2006) in the competing values framework, influence participation in wellness activities, employee health behavior change, and employee work behaviors and

attitudes (job satisfaction, job stress, intention to turnover, employee engagement, and performance). Future research could also examine which dimensions of organizational culture (dominant characteristics, organizational leadership, management of employees, organizational glue, strategic emphasis, or criteria of success) have the greatest influence on employee outcomes in each typology (Cameron & Quinn, 2006). The research studies could identify which organizational cultures provide the highest level of favorable employee work and health outcomes. For example, perhaps the Clan culture would be most supportive of employee health behavior change and participation in wellness activities as it values human development and communication. Leaders in Clan cultures tend to be mentors, team builders, and facilitators, so it would be expected that leadership in a Clan culture would be supportive of health promotion and strive to create a climate that supports employee well-being in an organization that has identified employee well-being as a business priority.

Furthering the findings of the current study, researchers could specify the level of leadership (e.g., executive, manager, or supervisor) support for health promotion to understand how each leadership level influences employee work and health behaviors, and which leadership level has the greatest positive impact on employee work and health outcomes. Additionally, adding a demographic field for employees to report their department in the organization would allow practitioners to make comparisons of leadership support for health promotion and organizational health climate across the organization. Executives, managers, and practitioners would then be better able to identify where to target resources. For example, if the information technology employees indicate low leadership support for health promotion and low organizational health

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climate while the facilities department indicates high leadership support for health promotion and high organizational health climate, practitioners would know to take a closer look at the information technology department practices around health and well-being.

In addition, qualitative studies could be done to explore the mechanisms by which employees' perceptions of leadership support for health promotion work to increase employee participation in wellness activities and successful health behavior change. Further qualitative examination could be done on how participation in wellness activities and health behaviors work to increase job satisfaction, employee engagement, and performance, and how participation in wellness activities works to lower job stress and intention to turnover. These qualitative studies could be followed up by more quantitative studies seeking to identity the mediating and moderating variables that affect the relationship between employees' perceptions of leadership support for health promotion, participation in wellness activities, and work behaviors. Perhaps a mediator is leader-member exchange and the feeling that the supervisor actually cares about the employee's wellbeing that contributes to the employee's feeling of job satisfaction and engagement. Perhaps it is the job satisfaction and engagement that contributes to higher performance and lower intentions to turnover.

The current study also provides evidence that leadership support for health promotion predicts overall participation in wellness activities and contributes to successful health behavior change. Future research could empirically investigate the causal linkages between the variables of employees' perceptions of leadership support for health promotion, employee participation in wellness activities, and health behavior

change. Previous research on successful health behavior change shows the important role of support (Allen, 2001; DeJoy et al., 2009; DeJoy et al., 2008; Wayne, Shore, & Liden, 1997).

Future research could also examine other factors not studied that may impact the relationship between employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee health-related and work behaviors and attitudes. In general, it is possible that high performers and more engaged workers have their leader's support (Liden & Maslyn, 1998). In line with leader-member exchange theory, which suggests that high-quality leader-follower relationships are characterized by mutual support, trust, and overall engagement (Graen & Uhl-Bien, 1995), these highly-engaged employees may be more likely to participate in all organizational programs not just wellness activities. A study designed to identify high performers and highly engaged workers could assess their perception of their supervisor's support of their participation in wellness activities as well as other organizational programs.

It is also possible that under conditions where employees perceive leadership support for health promotion, the employees reciprocate by engaging more in their work. Therefore, future research could investigate employees' perceptions of leadership support for health promotion as a potential mediating variable between employee engagement and employee well-being. Another study could investigate the role of employee individual characteristics in these leader-follower relationships. For example, it may be that high performers and engaged workers are generally more likely to be more successful people (perhaps they have a more internal locus of control and higher

achievement motivation) and this is what leads them to have better health behaviors, better relationships with their leader, and better stress management.

Additional factors not included in the present study that could be explored were provided in the employee comments in the current study about what could have made their health goal easier to achieve. These factors may broaden the understanding of the best predictors of employee participation in wellness activities and successful health behavior change. The employee comments include workplace bullying/incivility; stress and overwork; use of incentives or disincentives; and specific company policies relating to tobacco use, flexible work schedules, and healthy food access at company meetings, lunches, functions, as well as in cafeterias and vending machines.

It is likely that workplace bullying/incivility is related to participation in wellness activities, employees' perceptions of leadership support and employees' perceptions of organizational climate. Research on workplace bullying/incivility has found that it has a negative impact on employee work, health (physical and emotional) and motivation (Bartlett & Bartlett, 2011). It seems logical that employees who experience workplace bullying may rate leadership support for health promotion and organizational health climate as lower, especially if the bullying is done by organizational leaders and/or not addressed by leadership (Parzefall & Salin, 2010). Research has been done on conflict resolution looking at the relationship between management styles (integrating, accommodating, avoiding, compromising, and dominating) and the likelihood of uncivil behavior (Trudel & Reio, 2011). Research has also been done in Great Britain to examine leadership styles as predictors of workplace bullying, and it was found that all four leadership styles (autocratic, non-contingent punishment, laissez-faire, and

participative) were correlated with bullying (Hoel, Glasø, Hetland, Cooper, & Einarsen, 2009). Research studies investigating leadership styles in conjunction with employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate would extend the findings of Hoel et al. (2009).

Other variables that could be explored in future research are stress and overwork. This study found employees who reported lower level of leadership support for health promotion also reported higher levels of job stress. Does lack of support for health promotion lead to increased stress, or is it the lack of leadership support in general? Some respondents in the current study indicated they were required to work more than 35-40 hours per week. A qualitative study designed to look at sources of stress either from work or non-work sources, work hours, and the employees' perception of leadership support for health promotion and employees' perception of organizational health climate would provide insight into the role leadership support for health promotion and organizational health climate play in employee job stress and work hours. It is likely that employees who are expected to work long hours report greater amounts of non-work stress, especially if they have children, elderly parents, or physical health limitations. More time at work equates less time for friends, family, healthy cooking, exercise, and self-care in general (Matthews, Swody, & Barnes-Farrell, 2012). A follow-up quantitative study on work/life balance could be done to determine where employees fall on the segmentation-integration continuum (Bulger, Matthews, & Hoffman, 2007), and how that influences their work/life balance, job stress, perceptions of support, and perceptions of organizational climate. A follow-up quantitative study on the sources of job stress could be designed to classify job stress as a challenge or hindrance (Podsakoff

et al., 2007), and would further our understanding of the role job stress plays in relationship to job satisfaction, organizational commitment, intention to turnover, withdrawal behavior, and turnover.

Incentives or disincentives were additional factors that could be added to future research. As already mentioned the use of incentives in workplace wellness programs has been investigated and found to be predictive of participation (Grossmeier, 2013; Seaverson et al., 2009; Taitel et al., 2008; Wilhide et al., 2008). Future studies designed to investigate overall participation in wellness activities should also include incentives in its design. Although most employers opt to incentivize participation in wellness activities, some have begun to incorporate penalties or disincentives. Limited research has been done in this area, but one study found reported negative employee perceptions about company support for wellness when disincentives were used (Tannenbaum, Valasek, Knowles, & Ditto, 2013).

Another area for additional research would be the impact of specific company policies relating to tobacco use, flexible work schedules, and healthy food access at company meetings, lunches, functions, as well as in cafeterias and vending machines. Goetzel et al. (2007) in a benchmarking study asked organizations if they had written policies for tobacco use, alcohol use, seat belt use, physical activity (e.g., allowing fitness breaks), and nutrition (e.g., requiring healthy food options). The majority of the respondent organizations were found to have tobacco use and alcohol use policies, but only a few had physical activity and nutrition policies. In the current study, some respondents indicated that their organization had a tobacco free policy, but that it was not enforced. Therefore, their perception was that the organization was not serious about

wellness as it did not enforce its own policies to support employee well-being. A similar example was found relating to food offered by organizations in vending machines, at meetings, in cafeterias or at work-sponsored functions. Organizations encouraged employees to eat well, but did not make healthy food choices available to employees. Future research studies could look at organizational policies around tobacco use and healthy food options and employee perceptions of expectations to not use tobacco, and employee perceptions of the availability of healthy food choices. In addition, many employees indicated that they did not have time to get out of the office to exercise. In some cases employees indicated it was challenging to take breaks or leave for lunch. Future research could be done on physical activity polices in the workplace and their influence on employee physical activity (Hambrick, Simmons, & Mahoney, 2013). Lastly, some employees indicated that they worked long hours, leaving little time to cook healthy meals, exercise, spend time with family and friends, or engage in self-care activities. Incorporating flexible work schedules may provide the flexibility in the workday that employees need to be able to focus on their health. Research studies on flexible work schedules, employee perceptions of support, and employees' perceptions of organizational health climate would provide further understanding of the impact flexible work schedules have on employees' work and health behaviors.

The present study should be regarded as a preliminary investigation requiring replication among other industries and different size organizations. Expanding the study regionally and even nationally among other industries would provide comparative information for executives, managers, and worksite wellness and human resource practitioners to use when allocating their wellness resources and designing programs.

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Focusing research on small (< 100 employees) companies would help provide the same type of information and might help identify model organizations. This research would help inform small business executives who might be seeking grant funding under the Affordable Care Act to start a wellness program.

Summary of Study

The current study bridged the gap in published research about the relationships among employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee work and health behaviors. Survey data were collected from employees in four organizations across one state in the southeast United States. Correlational and multiple regression analyses were used to gain a better understanding of the relationships among employees' perceptions of leadership support for health promotion, employees' perceptions of organizational health climate, and employee work and health behavior outcomes.

The current study built on previous research by (a) providing an empirical study that supports the discussed role of leadership in the workplace wellness equation, exploring employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate in the same study; (b) expanding the research on employees' perceptions of leadership support for health promotion to include all levels of employees in the organization; and (c) investigating the relationships between employees' perceptions of leadership support for health promotion and employees' perceptions of organizational climate, and employee work and health behaviors. Study findings indicate that employees' perceptions of leadership support for health promotion are predictive of employee participation in wellness activities. The

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study also found that employees' perceptions of organizational health climate is predictive of job satisfaction, job stress and employee engagement. Overall, the results of this study confirm the importance of employees' perceptions of leadership support for health promotion and employees' perceptions of organizational health climate in the strategic development, management and continuation of workplace wellness.

These findings have important implications for theory as they expanded the use of a leadership support instrument to include all levels of employees, and thus enabled the researcher to examine the role of employees' perceptions of leadership support for health promotion on employee work and health behaviors. Study findings suggest that employees who report high levels of leadership support for health promotion and a positive organizational health climate are also more likely to participate in wellness activities. Likewise, employees who report higher levels of leadership support for health promotion and a positive organizational health climate are also likely to experience higher levels of success with health behavior change outcomes, job satisfaction, engagement, and work performance. These findings have critical implications for practice as leaders and organizations strive to promote authentic perceptions of support for health promotion and a positive climate for health as key leverage points for employee participation in wellness activities, positive health behavior change, and positive work behavior and attitude outcomes. Future research can extend the findings from the present study by continuing to bridge the organizational behavior, management, and human resource development research with the public health research on workplace wellness programs.

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APPENDIX A

WORKPLACE WELLNESS SURVEY

Leading by Example (LBE) Instrument (Della et al., 2008)
Uses a five-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*).

Business alignment with health promotion objectives:
1. [Organization name]'s goals and plans advocate for the improvement of employee health
2. Organizational objectives for health improvement at [organization name] are set annually

Awareness of link between health and worker productivity:
3. Employees at all levels are educated about the true cost of health care and its effects on organizational success
4. All levels of management at [organization name] are educated regarding the link between employee health and productivity and cost management
5. **All levels of employees are educated about the impact a healthy workforce can have on productivity and cost management
6. **[Organization name] leadership shares information with employees about the effect of employee health on overall organizational success

Worksite support for health promotion:
7. [Organization name] offers incentives for employees to stay healthy, reduce their high risk behavior, and/or practice healthy lifestyles
8. [Organization name]'s health benefits and insurance programs support prevention and health promotion
9. My work group provides support for participation in health promotion programs
10. ** [Organization name] offers a work environment that promotes employee health
11. ** [Organization name] offers programs and services that help me practice good health behavior

Leadership support for health promotion:
12. [Organization name] provides its leadership training on the importance of employee health
13. [Organization name]'s leaders view the level of employee health and well-being as an important indicator of the organization's success
14. [Organization name]'s leadership is committed to health promotion as an important investment in human capital
15. ** [Organization name]'s leadership is taking direct steps to positively impact employee health
16. Overall, [Organization name] promotes a culture of health and well-being

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*** indicates a new item added to this version (not part of the original validation analyses printed in AJHP 2008).*

Lifegain Health Culture Audit© (Allen, 2008)

Uses a 5-point Likert-type agreement scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*)

Among my immediate coworkers, it is expected and normal to…
1. Celebrate accomplishments.
2. Treat all people with respect and fairness, regardless of sex, age, race, disability or sexual orientation.
3. Not come to work sick.
4. Form and maintain friendships at work.
5. Come to work rested.
6. Achieve a balance between work, rest and play.
7. Practice some form of stress management technique (such as yoga, meditation or prayer).
8. Be physically active (such as taking a brisk walk for at least 30 minutes most days).
9. Not eat or drink too much at work-related social events and meetings.
10. Eat amounts of food that help maintain a healthy weight.
11. Eat foods that are low in fat and refined sugar and high in whole grains, fruits and vegetables.
12. Drink alcohol moderately, if at all (that is, not more than 14 drinks per week or more than 3 drinks on a single day).
13. Get help with alcohol or other drug problems early on.
14. Not smoke.
15. Drive safely.
16. Organize work to avoid injury (addressing such issues as office layout, lighting and safety gear).

Policies and Procedures
17. In my workgroup, people are taught skills needed to achieve a healthy lifestyle.
18. In my workgroup, people are rewarded and recognized for efforts to live a healthy lifestyle.
19. In my workgroup, participation in healthy activities is a primary way to renew friendships and to meet new people.
20. In my workgroup, there is no such thing as being too health-oriented (for example, healthy behaviors such as stress management, exercise and healthy eating are almost never made fun of or discouraged).

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21. In my workgroup, unhealthy practices such as overworking are almost never praised or rewarded.
22. New employees in my workgroup tend to support wellness.
23. New employees in my workgroup are made aware of the organization's support for healthy lifestyles.
24. In my workgroup, we have one or more traditions or rituals that symbolize our commitment to healthy lifestyles.
25. In my workgroup, traditions and celebrations have been adjusted so that they are consistent with supporting healthy lifestyles.
26. In my workgroup, people are made aware of wellness programs and resources that are available.
27. In my workgroup, people regularly assess how they are doing in terms of living a healthy lifestyle.
28. Managers model a healthy lifestyle.
29. Work-related social activities are healthy activities.
30. The use of time, company facilities, money, and other resources demonstrates our organization's commitment to employee health.
31. Healthy lifestyles are supported by aspects of the physical work environment, such as available food choices, accessible stairways, changing rooms, and bike racks.

Shared Values, Peer Support and Climate
32. Supporting employee wellness is among the top priorities in this organization as a whole.
33. Living a healthy lifestyle is highly valued in our workgroup.
34. My immediate supervisor supports employees' efforts to adopt healthier lifestyle practices.
35. My immediate coworkers support one another's efforts to adopt healthier lifestyle practices.
36. My close friends (at work and outside of work) support one another's efforts to adopt healthier lifestyle practices.
37. My housemates support one another's efforts to adopt a healthier lifestyle practices.
38. In my workgroup, we have a sense of community (for example, people really get to know one another, feel as if they belong, and care for one another in times of need.)
39. In my workgroup, we have a shared vision (for example, we are inspired by what we are trying to achieve, we feel that the organization's conduct is consistent with our personal values, and we are clear about our role in the success of the organization).
40. In my workgroup, there is positive outlook (for example, we enjoy our work, celebrate accomplishments, adopt a "we can do it" attitude and bring out the best in each other).

Please rate the success of any lifestyle changes you have made in the past 12 months. Leave blank any lifestyle change not attempted.

Used a 5-point Likert-type success scale (1 = *Not at All Successful,* 2 = *A Little Successful,* 3 = *Somewhat Successful,* 4 = *Moderately Successful,* 5 = *Very Successful*)

1. Lose weight
2. Eat healthier
3. Increase physical activity
4. Manage stress
5. Improve social relationships
6. Stop smoking
7. Address alcohol or other drug abuse problems
8. Stay current on health screenings

Michigan Organizational Assessment Questionnaire Job Satisfaction Subscale (MOAQ-JSS) (Cammann et al., 1979; Cammann et al., 1983)

A five-point Likert type scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *strongly agree*).

1. All in all I am satisfied with my job.
2. In general, I don't like my job. (reverse scored)
3. In general, I like working here.

Employee Engagement Items (Rich et al., 2010)
A five-point Likert type scale (1 = *disagree strongly*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, 5 = *agree strongly*).

1. I devote a lot of energy to my job
2. I try my hardest to perform well on my job
3. I am enthusiastic in my job
4. I feel energetic at my job
5. At work, I focus a great deal of attention on to my job
6. At work, I am absorbed by my job

Job stress (Cohen et al., 1983)

This portion of the survey asks for your perceptions and feelings about your job and about working for your organization. Please answer each question as it applies to your current work situation.

(1 = *Never*, 2 = *Almost Never*, 3 = *Sometimes*, 4 = *Fairly Often*, 5 = *Very Often*)

1. In the last month, how often have you been upset because of something that happened unexpectedly at work?
2. In the last month, how often have you felt difficulties were piling up so high at work that you could not overcome them?
3. In the last month, how often have you felt that you were on top of things at work?

(reverse scored)
4. In the last month, how often have you felt nervous and "stressed" at work?
5. In the last month, how often have you been able to control the way you spend your time at work? (reverse scored)
6. In the last month, how often have you found that you could not cope with all the things that you had to do at work?

Intention to turnover scale (Colarelli, 1984)

(1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, 5 = *Strongly Agree*)

1. I frequently think of quitting my job.
2. I am planning to search for a new job during the next 12 months.
3. If I have my own way, I will be working for this organization one year from now. (reverse scored)

Absenteeism and Presenteeism (Kessler et al., 2004)

About how many hours altogether did you work in the past 7 days? (If more than 97, enter 97.) Reported as number of hours (00-97)

How many hours does your employer expect you to work in a typical 7-day week? (If it varies, estimate the average. If more than 97, enter 97.) Reported as number of hours (00-97)

Now please think of your work experiences over the <u>past 4 weeks</u> (28 days). In the spaces provided below, write the number of days you spent in each of the following work situations.

In the past 4 weeks (28 days), how many days did you...	**Number of days (00-28)**
...miss an **entire** work day because of problems with your physical or mental health? (Please include only days missed for your **own** health, not someone else's health.)	☐☐
...miss an **entire** work day for any other reason (including vacation)?	☐☐
...miss **part** of a work day because of problems with your physical or mental health? (Please include only days missed for your **own** health, not someone else's health.)	☐☐
...miss **part** of a work day for any other reason (including vacation)?	☐☐

...come in early, go home late, or work on your day off?	☐☐

About how many hours altogether did you work in the past 4 weeks (28 days)? (See examples below.)

☐☐☐ **Number of hours in the past 4 weeks (28 days)**

> **Examples for Calculating Hours Worked in the Past 4 Weeks**
>
> 40 hours per week for 4 weeks = 160 hours
> 35 hours per week for 4 weeks = 140 hours
> 40 hours per week for 4 weeks with 2 8-hour days missed = 144 hours
> 40 hours per week for 4 weeks with 3 4-hour partial days missed = 148 hours
> 35 hours per week for 4 weeks with 2 8-hour days missed and 3 4-hour partial days missed = 112 hours

Used scale (1 = *Worst Performance*, 2 = *Very Poor Performance*, 3 = *Poor Performance*, 4 = *Neither Good nor Poor*, 5 = *Good Performance*, 6 = *Very Good Performance*, 7 = *Top Performance*)

On a scale from 1 to 7 where 1 is the worst job performance anyone could have at your job and 7 is the performance of a top worker.

1. How would you rate the usual performance of <u>most workers</u> in a job similar to yours?
2. How would you rate <u>your usual job performance</u> over the past year?
3. How would you rate <u>your overall job performance</u> on the days you worked during the past 4 weeks (28 days)?

Overall Participation in Wellness Activity
(1 = *not at all*; 2 = *a little*; 3 = *somewhat*; 4 = *to a considerable extent*; 5 = *to a very great extent*; n/a = not applicable)
1. I have participated in health education workshops (such as reducing stress, healthy eating, weight loss, and time management) offered by my organization.
2. I have completed a health risk assessment (an online survey).
3. I have participated in biometric screenings (e.g., blood pressure readings) offered by my organization.
5. I have participated in health or lifestyle coaching offered by my organization.
6. I have participated (or currently participate) in the tobacco cessation program offered by my organization.
7. I have participated in fitness activities (such as fitness center, or exercise class) sponsored by my organization.
8. Overall, I consider myself an active participant in my organizations wellness programs.

Current Health Status (Clark et al., 2011)

(1= *Extremely Poor*, 2 = *Poor*, 3 = *Fair*, 4 = *Good*, 5 = *Excellent*)

How would you rate your overall health?
During the past week, including today, how would you rate your overall quality of life?

Demographic questions

How long have you worked for this organization?
Less than one year
1 - 5 years
6 - 10 years
11 - 15 years
16 years or more
Prefer not to answer

What is your age?
20 years old or less
21-30
31-40
41-50
51-60
61-70
71 years or older
Prefer not to answer

What is your sex?
Female
Male
Prefer not to answer

What is your race/ethnicity?
Asian
Black or African American
Hispanic or Latino
Native American (not Pacific Islander)
Pacific Islander
White or Caucasian
Bi-Racial or Multi-Racial
Prefer not to answer

What is the highest level of school you have completed or the highest degree you have received?
Less than high school
High school or equivalent (e.g., GED)
Some college but no degree

Associate degree
Bachelor degree
Master degree
Doctoral or professional degree (PHD, MD, JD)
Prefer not to answer

Which of the following best describes your role?
Administrative/Clerical
Executive/Partner
Manager or Supervisor
Production/Service
Professional
Other
Prefer not to answer

What is your job status?
Full-time
Part-time
Prefer not to answer

What industry best describes your organization? Industry type (2012 NAICS
Agriculture, Forestry, Fishing and Hunting
Mining, Quarrying and Oil and Gas Extraction
Utilities
Construction
Manufacturing
Wholesale Trade or Retail Trade
Transportation and Warehousing
Information
Finance and Insurance
Real Estate and Rental and Leasing
Professional, Scientific, and Technical Services
Management of Companies and Enterprises
Administrative and Support and Waste Management and Remediation Services
Educational Services
Health Care and Social Assistance
Arts, Entertainment, and Recreation
Accommodation and Food Services
Other Services (except Public Administration)
Public Administration

APPENDIX B

To: Judd Allen, Ph.D.
From: Jennifer W. Hoert, M.Ed.
Date: October 15, 2013
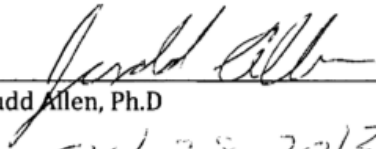RE: License to use Lifegain© Health Culture Audit

As per our recent phone conversation, I am sending this formal request for your written permission as the rights holder to make use of the Lifegain© Health Culture Audit (Lifegain) copyrighted by your company, Credit Human Resources Institute, LLC.

You agreed to send the most recent version of the survey items to me electronically, in conjunction with your permission to use the Lifegain in my scholarly work. I plan to use the survey items in my doctoral research in combination with other instruments and items.

The scholarly outcome will be reported in my dissertation, and may eventually be incorporated into later publications (e.g., a journal article). As we agreed, I will:
1. Credit Human Resources Institute, LLC as the source of the instrument holding full copyright.
2. Provide you with an electronic copy of my dissertation as a .pdf file upon full approval from my dissertation committee.

By signing below you agree to the terms outlined above.

_____
Judd Allen, Ph.D

Oct 28, 2013
_____
Date

APPENDIX C

SOLICITAION LETTERS

PRE-NOTIFICATION

Subject: Worksite Wellness Survey

A few days from now you will receive an email request to fill out a brief questionnaire for an important research study being conducted by researchers at the University of Louisville.

The study investigates factors that influence employee wellness and wellbeing. Your input to this study is valuable and critical to helping employees and organizations achieve a positive and healthy work climate.

I am writing in advance to request that you take the time to complete the anonymous survey when you receive it in your email. It is only with employees' and managers' inputs from all levels that the study will provide meaningful and useful results.

Thank you for your time and consideration.

Sincerely,

Jennifer W. Hoert, M.Ed., PHR
Co-Investigator
Educational Leadership and Learning Program
University of Louisville
Jennifer.hoert@gmail.com

SURVEY LETTER

Subject: Workplace Wellness Survey

I am writing to ask for your participation in a study being conducted by researchers at the University of Louisville. The study investigates factors that influence employee wellness and wellbeing.

[Organization name] has agreed to participate in this study. As an employee of this organization you are being invited to participate by completing the survey at the link below.

Results from this survey will be used to help [Organization name] improve its workplace wellness program and activities. It will also provide important insights into how workplace wellness programs can impact employee health and work behaviors, something Kentucky would greatly benefit from as we lead the nation in cases of several chronic diseases.

Your answers are completely anonymous. No individual responses will be identified in any way, and only a group summary of responses will be reported. Your completion of this 15-20 minute survey is vital to provide complete and accurate information about ways that [Organization name] and other organizations can achieve a positive and healthy work climate. Please complete the survey by clicking on the link below:

[Link]

If you have any questions or comments about this study, you can reach Jennifer Hoert at jennifer.hoert @gmail.com or at 502-396-4869.

Sincerely,

Jennifer W. Hoert, M.Ed., PHR
Co-Investigator
Educational Leadership and Learning Program
University of Louisville
Jennifer.hoert@gmail.com

REMINDER/THANK YOU

Subject: Workplace Wellness Survey

Last week I sent you a link to a survey via e-mail. The survey is part of a study being conducted by researchers from the University of Louisville about employee perceptions of workplace wellness.   [Organization name] is one of the participants in the study.

If you have already completed the survey, please accept our sincere thanks! If you have not yet completed the survey, please do so today as the study is drawing to a close. We are especially grateful for your help because it is only by getting input from all employees that we can understand factors that lead to a positive and healthy workplace.

Here is the survey link for your convenience. Simply click on this link to begin the survey

[Link]

We want to assure you that your responses to this survey are completely anonymous and voluntary, and if you prefer not to respond that's fine. However, our concern is that people who have not responded may have had different experiences than those who have. Hearing from as many employees as possible helps assure that the survey results are as accurate as possible.

We appreciate your willingness to consider our request as we conclude this effort to better understand factors affecting workplace wellness.

Thank you for your assistance with this research study!

Sincerely,

Jennifer W. Hoert, M.Ed., PHR
Co-Investigator
Educational Leadership and Learning Program
University of Louisville
Jennifer.hoert@gmail.com

APPENDIX D

LIST OF OTHER RESPONSES (ROLE)

Could be Reclassified	Response
Administrative/Clerical	Executive Secretary
Administrative/Clerical	I take offense reports, manage projects, write policy
Administrative/Clerical	Loan Officer Assistant
Administrative/Clerical	Support Staff
Administrative/Clerical	Research Assistant
Executive/Partner	Market President
Executive/Partner	Owner
Manger or Supervisor	Manager and supervisor
Manger or Supervisor	Coach
Manger or Supervisor	Sales - 2
Production/Service	Maintenance
Production/Service	Technical (IT) – 2
Production/Service	Customer Service Representative – 5
Production/Service	Bank Teller – 10
Professional	Anesthesiologist
Professional	Educator
Professional	Faculty – 5
Professional	Financial Analyst
Professional	Investments
Professional	Paraprofessional
Professional	Research – 2
Professional	Surgery resident
Professional	Training specialist
Other	Trainee

CURRICULUM VITAE

Jennifer W. Hoert, M.Ed.   Curriculum Vitae
6902 Greenlawn Road, Louisville, KY 40222   jennifer.hoert@gmail.com
502-396-4869

EDUCATION
University of Louisville; Louisville, KY   *In progress*
Ph.D. Student – Doctor of Philosophy – Human Resources and Organizational Development with emphasis in Leadership and Organizational Development; Organizational Leadership and Learning

University of Louisville; Louisville, KY   2003
Master of Education – Human Resource Education

University of Evansville; Evansville, IN   1997
Bachelor of Arts – Spanish/International Studies

CERTIFICATIONS
Institute for Integrative Nutrition; New York, NY   2013
Certified Health Coach

Human Resources Certification Institute; Alexandria, VA   2006
Professional in Human Resources (PHR) Certification

Ball State University; Muncie, IN   2005
ESL Workforce Training Certificate

ACADEMIC EXPERIENCE
INDIANA UNIVERSITY SOUTHEAST; New Albany, IN   2013-present
Adjunct Professor
- Teach Business Career Planning to junior and senior undergraduate students (18 students in one section), and Business Career Perspectives to freshman and sophomore undergraduate students (~28 students per class, taught two sections) for the School of Business

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- Classes were taught face-to-face with online integration of Oncourse for class announcements, messages, syllabus, resources, learning modules, assignments and tests, and gradebook

McKENDREE UNIVERSITY; Louisville, KY   2006
Adjunct Professor
- Developed and taught Business Research Methods and Applications class for the Masters in Business Administration Program, and the Curriculum, Instructional Methods, and Evaluation class for the Masters in Nurse Education Program
- Classes were taught face-to-face with online integration of Blackboard for supplemental instructional materials and resources, assignments, and discussion board

TULLEY ELEMENTARY SCHOOL; Louisville, KY   1999-2000
Spanish Bilingual Associate Instructor
- Managed ten different classes of fourth and fifth graders, planned instruction and assessed students' learning

TRAINING AND DEVELOPMENT EXPERIENCE
PRESENT MOMENT HEALTH; Louisville, KY   2012-present
President, Holistic Health & Life Coach
- Support organizational leadership with workplace wellness programs and the creation of cultures focused on health and wellbeing
- Lead corporate workshops on wellbeing, smoking cessation, and group cooking classes
- Offer individual and group health, life, and nutrition coaching, and individual and group cooking classes
- Help professionals create healthier and happier lives, reduce stress, have more energy and reach their health and life goals

SEVEN COUNTIES SERVICES, INC.; Louisville, KY   2002-2003
Administrative Assistant/Trainer, Human Resources
- Conducted New Employee Orientation; implemented changes to incorporate computer-based resources
- Developed and implemented Survival Spanish Training; facilitated Diversity Training.
- Served on Minority Recruitment and Retention Committee, Diversity Team Committee, and Customer Service Team contributing to the strategic initiatives of the organization
- Chaired Employee Survey sub-committee, Employee Recognition Awards Action Team, Recruitment sub-committee facilitating the needs assessment process and identifying gaps in performance

INSTITUTE OF INTERNATIONAL EDUCATION; Mexico City, Mexico   1996-1998
Program Officer/Foreign Student Advisor
- Administered Fulbright Scholarships in engineering, science and technology
- Delivered presentations in Spanish on all aspects of US education to students and community
- Initiated outreach programs, delivered to up to 300 people, assisted with University Fairs
- Trained educational advisors from other Latin American and Caribbean Centers
- Organized and participated in pre-departure and training workshops for students and updated Institute Website

PROFESSIONAL EXPERIENCE
KENTUCKY DERBY MUSEUM; Louisville, KY   2004-2013
Director, Backside Learning Center
- Administered educational programming, managed and developed all team members and volunteers, and with the Board of Directors, created and implemented a strategic and annual operating plan
- Wrote, planned, and oversaw the resource development strategy which raised enough annually to support a budget of $120,000 with a year in reserve
- Created synergistic partnerships with Churchill Downs, Jefferson County Public Schools – Adult & Continuing Education, The Race for Education, and The Elite Program for the delivery of educational programs to the mostly English as a Second Language (ESL) students
- Conducted regular needs assessments and used the results to develop educational programs for the backside workers
- Designed, developed and implemented training for team leaders relating to current human resources issues
- Recognized in 2005 as the Most Innovative Program/Partnership by Kentuckiana Works
- Sponsored by National Center for Family Literacy in a two-week Teacher-Exchange program with Mexico

GREATER LOUISVILLE INC.; Louisville, KY   2003-2004
Academic Coach, H-1B Technical Skills Training Grant
- Conducted needs assessments to identify and create programs that built success into a healthcare career plan for legal immigrant population
- Developed collaborative relationships and facilitated partnerships with faith- and community-based organizations that worked with immigrants, human resource professionals in healthcare, and healthcare educators
- Established a partnership between Greater Louisville Inc., Jefferson County Public Schools-Adult Education, and Kentucky Healthcare Training Institute to teach a six-week English as a Second Language (ESL)/Certified Nurse Assistant (C.N.A.) class to legal immigrants

- Thirty-five legal immigrants secured employment as a result of the grant, and wage increases totaling $33.29/hour were a direct result of the ESL/C.N.A. class participation

MOTOR COACH INDUSTRIES; Louisville, KY   2000-2001
Bilingual Help Desk Specialist/Junior Technician
- Administrator for 1500+ users on a Microsoft NT 4.0 Network, including offices in Canada and Mexico
- Answered calls in English and Spanish, provided immediate solutions or routed issues out and monitored progress
- Provided troubleshooting and maintained and modified AS400, NT and Lotus Notes accounts

MANPOWER, INC.; Louisville, KY   2000
Bilingual Staffing Specialist
- Promoted services to the Hispanic/Latino population and recommended job placement opportunities
- Matched skills of employees to customer needs, resolved problems and provided exceptional customer service
- Conducted outside service calls to ensure customer satisfaction and to sell contingent and direct hire services

AMERICANA COMMUNITY CENTER; Louisville, KY   1999-2000
Assistant Director/Summer Youth Coordinator
- Supervised staff and designed and implemented a grant based summer youth program and recruited volunteers
- Managed JCPS/ACC ESL After-School Program

JEFFERSON COUNTY PUBLIC SCHOOLS; Louisville, KY   1999-2000
Coordinator: After School English as a Second Language Program
- Supervised teachers and volunteer tutors for a multicultural after-school program

JAMES E. BECKLEY & ASSOCIATES; Wheaton, IL   1998-1999
Office Manager/Paralegal
- Managed and supervised a small securities law firm, and oversaw project management for 50+ cases.

PUBLICATIONS
Hoert, J.W., (2014, Spring). Workplace wellness leadership. *Kentucky SHRM Magazine*, 16-17.
Bailey, A., Hoert, J.W. (2013, Fall). HR's role in workplace wellness. *Kentucky SHRM Magazine*, 20-21.
Hoert, J.W. (2005). Adapting content materials to meet language needs of adult ESL students. *INTESOL Journal, 2*(1), 65-72.

PRESENTATIONS

Hoert, J. *Creating a Positive and Healthy Work Environment for Employees.* Kentucky Worksite Wellness Conference, Lexington, KY, February 18-19, 2014.

Bailey, A., Benson, P., Elder, A., Ensman, J., Hoert, J., White, J. *General Session: Worksite Wellness Best Practice Panel.* Kentucky Worksite Wellness Conference, Lexington, KY, February 18-19, 2014.

Bailey, A., Hoert, J.W. *The State of Wellness and HR's Role.* Kentucky Society for Human Resource Management Conference, Louisville, KY, September 25-27, 2013.

Bailey, A., Hoert, J.W. *Workplace Wellness for the Aging Employee Workforce.* Kentucky Worksite Wellness Conference, Lexington, KY, February 27-28, 2013.

Hoert, J.W. *It All Starts with Food: How to Integrate Health and Wellbeing into Your Business Strategy.* Kentucky Worksite Wellness Conference, Lexington, KY, February 27-28, 2013.

Aguilera, S., Hoert, J. W., Lieshoff, S.C. *The Mexico-U.S. Teacher Exchange Program: Ideas for Family Literacy.* National Conference on Family Literacy, Louisville, KY, April 25-27, 2005.

Hoert, J.W., Wormley, K., & Kerrick, S. *Overview of the Kentuckiana Healthcare Workforce Initiative.* Conference on Ethnic Populations in Kentucky Postsecondary Education, Louisville, KY, March 28-29, 2005.

PROFESSIONAL AFFILIATIONS AND ACTIVITES

- Kentucky Society for Human Resource Management Council, Co-Chair for Wellness, 2013-present
- Kentucky Worksite Wellness Advisory Board, Member, 2013-present
- International Association for Health Coaches, Member, 2013-present
- Society for Human Resource Management, Member, 2003-present
- Louisville Society for Human Resource Management, Member, 2013-present
- Teachers of English to Speakers of Other Languages, Student Member, 2005
- Kentucky Translators and Interpreters Association, Member Board of Directors, 2002-2003
- Hispanic-Latino Coalition, Member Board of Directors, January 2001-2003; Chair of Membership Committee, 2001-2002, Member, 1999-2003

REFERENCES

Dr. Ann Herd, Assistant Professor, University of Louisville, 328 CEHD, Louisville, KY 40292, (502) 417-6252, ann.herd@louisville.edu

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Dr. Meera Alagaraja, Assistant Professor, University of Louisville, 347 CEHD, Louisville, KY 40292, (502) 509-3543, meera.alagaraja@louisville.edu

Dr. Marion Hambrick, Assistant Professor, University of Louisville, HP/Studio Arts Room 104, Louisville, KY 40292, (502) 852-8286, marion.hambrick@louisville.edu

Dr. Ranida Harris, Associate Professor of Management Information Systems, Indiana University Southeast, 4201 Grant Line Road, New Albany, IN 47150, (812) 941-2324, rbharris@ius.edu