

GET MOVING: A GROUNDED THEORY ANALYSIS OF EMPLOYEES'
PERCEPTIONS OF PHYSICAL ACTIVITY PARTICIPATION IN WORKPLACE
WELLNESS PROGRAMS

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ABSTRACT

Workplace wellness programs (WWP) were developed to support employees' health behaviors and well-being. Although physical activity is incorporated into the definition of wellness and is a *modifiable* behavior that can both reduce the risk for chronic disease and lifestyle-related diseases and enhance health and well-being, performance of physical activity is often overlooked within WWP and the workplace in general. Rather than investigating organizational aspects of the WWP, this grounded theory-based study explored employees' perceptions concerning how their organization facilitated their participation in physical activity within WWP. To provide a theoretical framework, Self-Determination Theory (SDT) from Ryan and Deci (2000) offered the lens to understand the employees' motivation to participate in physical activity and Social Ecological Model (SEM) by Bronfenbrenner (1977) described the multiple levels of interaction between the employee and their organizational environment. The employees' perceptions elucidated their decision-making process. The emergent themes were time management, advantageousness, need for movement, supervisor ambivalence, social / "gregarious" connection, messages from leadership, limited awareness, culture of health, and incentives and reimbursements. Three levels (individual, relational, and organizational) and three facets (barriers, bolsters, and facilitators) illustrated the relationships among these themes. These themes, levels, and facets are exemplified in the grounded theory model. Consequently, six implications for practice were illuminated for organizations to employ for encouraging their employees to join and actively participate in physical activity in the WWP and in the workplace in general, providing better health outcomes for employees and improving the organizations' bottom line.

DEDICATION

I dedicate my dissertation work to my family, friends, classmates, and colleagues. I would also like to express special gratitude to my loving and caring mother, Kathleen, and my late father, Lewis Robert Tomlinson, who had so much faith in me that he gave me my graduation present before his unexpected passing three years prior to the completion of my dissertation. I would also like to thank my brother, Todd, who encouraged me and made me laugh when I needed a break.

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Carpe diem – Seize the day.

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CHAPTER 1: INTRODUCTION

Since the 1980's, workplace wellness programs (WWP) were developed and evolved to support the physical and psychological health of employees and reduce the risk of certain chronic health conditions among employees (Abraham, 2019).

Concurrently, WWP supported the organization through various human resource management-related outcomes, such as decreased recruitment costs (Wolfe et al., 1994; Parks & Steelman, 2008); improved employee health and reduced illness-related absenteeism (Parks & Steelman, 2008); lowered attrition rates and minimized “presenteeism” (Berry et al., 2010); strengthened employee engagement, reduced turnover, and improved profitability (Abraham & White, 2017); and improved employee productivity (Phillips & Gully, 2019).

Physical inactivity has been found to increase the risk for chronic disease, particularly of non-communicable diseases, such as coronary heart disease, breast and colon cancers, and type 2 diabetes (Lee et al., 2012; American Heart Association, 2018). Yet, physical activity is a *modifiable* behavior that can reduce the risk for chronic and lifestyle-related diseases and enhance health and well-being (Centers for Disease Control and Prevention (CDC), 2018; Piercy et al., 2018). Due to the pressures for organizations to manage healthcare costs, improve employee productivity, and enhance employee retention, organizations often seek ways to improve employee health; however, increasing employee participation in physical activity, particularly within the WWP, has often been overlooked. Consequently, physical activity could provide the key to enabling employees and the organization to reach their health and wellness goals.

Nevertheless, most of the prior research has focused on the aspects of an effective workplace wellness programs from an organizational level (Goetzel et al., 2007; Berry et al., 2010; Kadushin et al., 2016) or interventions to facilitate physical activity in the workplace (Cooley et al., 2014; Abdin et al., 2018; Thogersen-Ntoumani et al., 2014). Although many interventions are evidence or theory-based, few studies have focused on the employees' perceptions of participating in physical activity within WWP, and even fewer have developed a theory to facilitate employees' participation in physical activity within the WWP.

Acknowledging these gaps in prior research, this grounded theory-based study explored how employees perceive physical activity participation within WWP to provide better outcomes for both the organization and their employees. Through individual semi-structured interviews with employees from various organizations, this study developed a theory to support physical activity participation in the workplace from the rich personal experiences of the employees. Rather than focusing on the aspects of an effective WWP, the data from the individual employees within the organizations guided the development of a theory to support physical activity in WWP.

Background for the Study

According to Greenberg (1985), "wellness is the integration of social, mental, emotional, spiritual, and physical health at any level of health or illness" (p. 404). Although physical health is only one aspect of wellness, physical activity is a *modifiable* behavior that can support physical and psychological well-being, while reducing the risk for chronic disease and lifestyle-related diseases (CDC, 2018). Although rates of physical activity in America are slowly on the rise per the trend report from the National Health

Interview Survey (NHIS; 2018), only 54.2 percent of adults met the minimum federal physical activity guidelines for aerobic activity on a weekly basis. These guidelines recommend “moderate-intensity for ≥ 150 minutes/week or vigorous-intensity for ≥ 75 minutes/week, or an equivalent combination” (CDC, 2018, p. 1). At the same time, according to data from the U.S. National Health and Nutrition Examination Surveys (NHANES), Church et al. (2011) developed a “validated energy balance differential equation model” to estimate daily occupation-related energy expenditure among U.S. Occupations (p. 2). From their calculations, the estimated energy expenditure has decreased by more than 100 calories per day in the last five decades (Church et al., 2011).

As an extension of occupational safety programs since the 1920’s, workplace wellness programs (WWP) developed to support employee health and wellness, while curtailing risks for certain chronic diseases. WWP expanded in the 1980’s and 1990’s to provide more comprehensive services related to the fitness, educational, and psychological aspects of wellness (Parks & Steelman, 2008). In its current form, a WWP is defined as an “organized, employer-sponsored program that is designed to support employees (and sometimes, their families) as they adopt and sustain behaviors that reduce health risks, improve quality of life, enhance personal effectiveness, and benefit the organization’s bottom line” (Berry et al., 2010, p. 104).

Various reasons for implementing WWP can be found throughout the literature, including higher job satisfaction, decreased rates of illness-related absenteeism, and improved employee retention (Parks & Steelman, 2008). According to Phillips and Gully (2019), comprehensive WWP also reduced injuries; improved morale and loyalty; improved employee productivity; and reduced worker’s compensation and disability-

related costs. Other studies demonstrated that WWP also supported stronger employee engagement, reduced turnover, and improved profitability (Abraham & White, 2017). Overall, a well-executed program elicits “improvements in health and well-being of workers; cost savings through appropriate use of health care services; and enhanced individual and performance metrics” (Goetzel et al., 2014, p. 929).

In 2018, the Society of Human Resource Management (SHRM) conducted its annual Employee Benefits Survey among U.S. employers. According to this survey, an employer’s use of WWP translated to savings of approximately \$1,685 per employee each year by reducing missed work and associated losses in productivity (Employee Benefits Survey, 2018). The results also illustrated that organizations are starting to focus more on the organizational culture of health, rather than solely on the financial return on investment (ROI) and reduced healthcare costs. Further, WWP can positively impact the workplace by enabling employees to make healthier choices, which will ultimately support an organizational culture of health (Abraham, 2019).

Several researchers have assessed the aspects of an effective WWP. Most of the outcomes from these studies provided similar findings. Specifically, the following items have been identified as essential for an effective WWP, such as: effective communication, multilevel leadership, accessibility, and, most importantly, alignment with company’s identity and aspirations (Berry et al., 2010; Goetzel et al., 2007). A previous study revealed that six key ingredients are needed for a successful WWP, such as: “(1) health screenings, including health risk assessment (HRA) and biometric testing; (2) educational and self-help tools; (3) organized activities; (4) individual follow-up and treatment; (5) incentives; and (6) a supportive environment” (Bray, 2016, p. 39-41).

According to the RAND WWP Study, “about half of employers with at least 50 employees, and more than 90 percent of those with more than 50,000 employees, offered a wellness program in 2012” (Mattke et al., 2013, p. 1). Of the companies surveyed in the 2018 SHRM Employee Benefits Survey, “three-quarters (75%) of employers offer wellness resources and information and/or a general wellness program” (p. 9). However, only 62% of these employers provide general wellness programs.

While prior studies have shown the prevalence of WWP, limited research has demonstrated how many employees participate in physical activity within WWP. According to Linnan et al. (2008), only 19.6% of the employers who participated in the study incorporated physical activity programming into the WWP. Further, most companies did not provide an environment that was supportive to participating in physical activity, such as onsite fitness facilities, shower facilities, and/or walking trails.

To investigate the barriers and motivators for physical activity in the workplace, Bredahl et al. (2015) conducted semi-deductive, structured interviews with 18 office workers who also participated in the VIMS study from six different workplaces in Denmark. Barriers included lack of flexibility in the workplace, particularly related to deadlines and urgent tasks, and a guilty conscience from pressure to complete tasks from co-workers. Alternatively, the motivating factors included support and acceptance from the company’s leading authorities, flexibility within job planning, and support from co-workers. Ultimately, “the interaction between the individual and the environment seems to be a stronger predictor of compliance than individual factors alone” (Bredahl et al., 2015, p. 10).

Although prior research has looked at the aspects of an effective WWP, tested various physical activity-based interventions, and assessed barriers and motivators to participation, few studies have sought the input of the individual employees to develop a theory to support physical activity within the workplace. Therefore, to extend the prior research on the interaction of the employee and their environment and the subsequent influence on the individual's motivation to participate in physical activity within the WWP, this grounded theory-based study explored how employees perceive physical activity participation within workplace wellness programs to provide better outcomes for both the employees and the organizations. Semi-structured interviews were employed to collect data on the individual experiences of the employees. This data was compared against information on the organizations' WWP practices and other research studies through the process of triangulation, in which multiple sources, methods, and theories are used to corroborate the evidence (Creswell, 2013). The resulting themes were then used to develop a theory grounded in the experiences of the employees, such that the emergent theory may assist organizations in designing and implementing physical activity-based interventions within their WWP.

Theoretical Framework

Participation in physical activity within the WWP at a given organization is based on motivation, which is at the core of behavior change. To understand the employees' perceptions of how their organization facilitates their participation in physical activity aspects of the WWP, two theories provided the underlying framework for this study, particularly for the preparation of the interview guide. Self-Determination Theory (SDT) from Ryan and Deci (2000) offered the lens to understand the employees' motivation to

participate in physical activity and the Social Ecological Model (SEM) by Bronfenbrenner (1977) described the multiple levels of interaction between the employee and their organizational environment, which provided the structure for their decision-making process. These theories, however, remained in the background through the development of the grounded theory, as the data directly informed the emergent themes and model.

Established by Deci and Ryan in the 1970's, SDT applies a continuum of motivation across varying levels from amotivation to extrinsic motivation (externally focused) to intrinsic motivation (internally focused) (Silva et al., 2008). Each type of motivation incites the individual to achieve goals in different ways. Although extrinsic motivation is typically used to commence a certain behavior, intrinsic motivation provides the highest degree of long-term behavior change, resulting from the "inherent satisfaction of the activity itself" (Ryan & Deci, 2000, p. 71).

Silva et al. (2010) examined the use of SDT to develop an intervention to increase physical activity among participants. Specifically, the results demonstrated that the SDT constructs of competence, autonomy, and relatedness were successful in developing the participants' psychological needs and, in turn, resulted in increased levels of physical activity. By meeting the psychological needs of competence, autonomy, and relatedness, the individual can work through the continuum from extrinsic to intrinsic motivation to achieve healthy development and well-being (Ryan & Deci, 2000).

Developed by Urie Bronfenbrenner in the 1970's, SEM centers around a systems perspective to elicit behavior change. Through the lens of nested systems, SEM focuses on the interrelationship of the individual and their environment and the resulting

influence from multiple levels, including microsystem (individual), mesosystem (relationship), exosystem (community), and macrosystem (societal). Individuals engage in different types of activities at each level within the physical environment. This interaction serves to impact behavior change and develop well-being (Bronfenbrenner, 1977). According to Stokols (1992), ultimately, the “social-ecological perspective emphasizes the integration of person-focused and environment-focused strategies to enhance individual and collective well-being” (p. 15).

Due to its complex nature, the workplace can be considered as its own system, “comprising multiple social and physical environmental conditions, which jointly influence physical, mental, and social well-being” (Stokols et al., 1996, p. 138). These various aspects impact employee health and potential behavior change within the workplace. Although other systems also influence behavior change, the workplace can be used to analyze employee health and well-being from the SEM perspective.

Using both quantitative and qualitative methods, Cooley et al. (2014) employed SEM to develop a 13-week e-health intervention, called Exertime, which focused on increasing the participants’ physical activity, regardless of activity type or level. The Exertime software promoted non-purposeful activity among employees to reduce their prolonged sitting time. From the quantitative results, the intervention increased awareness of prolonged sitting times and triggered increased participation in leisure-time physical activity. For the qualitative portion of the study, the interview questions were based on the various levels of SEM, including individual (microsystem), workgroup (mesosystem), and organization (exosystem). The results illustrated that the interplay of these levels provided the appropriate environment to support behavior change among the employees.

Statement of the Problem

Since employees spend a great deal of time at work, the workplace seems like a logical environment to support physical activity to meet the standards for aerobic and muscle-strengthening activities, as established by the as established by the Department of Health and Human Services (HHS) under the auspices of the Physical Activity Guidelines Advisory Board (Piercy et al, 2018). These guidelines, described in further detail in Chapter 2, recommend that adults should perform at least 150-300 minutes of moderate intensity, 75 minutes of vigorous intensity, or an equivalent combination of moderate and vigorous intensity aerobic physical activity per week (Piercy et al., 2018).

In addition to the typical barriers to physical activity, several workplace-specific barriers to participation in physical activity exist. According to Bredahl et al. (2015), barriers in the workplace include lack of flexibility, urgent tasks, deadlines, unpredictability of their job tasks, and general busyness, among others. Consequently, several studies have investigated physical activity-based interventions within the workplace. However, few studies have focused on the employees' perceptions of participating in physical activity within WWP, and even fewer have developed a theory to facilitate employee's participation in physical activity within the WWP.

With the number of barriers impacting the potential for physical activity within the workplace, the culture of health within the organization is another key consideration. Generally, a culture of health is an environment that "places value on and is conducive to employee health and well-being" (Kent et al., 2016, p. 117). Employees, managers, and leaders play a role in establishing a supportive environment. Leaders provide the vision

and commitment to health; the managers work to align the resources to the mission; and the employees assume the responsibility for their own health and well-being.

Although the leaders may support the culture of health, the supervisors must support this culture within the daily work environment. Through a study of supervisors at the Mayo Clinic, Wieneke et al. (2019) discovered that most supervisors have “abundant resources but limited opportunities to use them,” suggesting the top leadership’s uneven commitment to employee well-being (p. 304). The supervisors considered healthy behavior as the responsibility of the individual employee and did not want to overstep their boundaries as a supervisor by encouraging their staff to perform physical activity within the WWP. Due to this ongoing conflict with supporting wellness, how to create a culture that supports health and well-being in the workplace remains elusive.

From the perspective of SEM, multiple levels of influence moderate the employees’ ability to participate in aspects of the WWP, particularly in physical activity. All levels of the individual (microsystem), workgroup (mesosystem), and organization (exosystem) need to interact in a manner that is conducive for creating an environment supportive of behavior change (Cooley et al., 2014). Although this qualitative study sought to understand the role of physical activity in the workplace, the procedure used a specific software-based intervention, rather than allowing the participants to develop their own physical activity regiment.

As a result of these competing demands in the workplace from the various levels of the organization and the limited prior research from the perspective of the employee, this study sought to discover the experiences and perceptions of employees related to the WWP at their organization and the role of physical activity within the WWP. Rather than

focusing on the organization or the aspects of the WWP, the perceptions of the individual employees across all levels of the organization provided the rich data to develop a theory to support physical activity in WWP. To provide the clinical significance for this study, the emergent theory resulted in an employee-focused model and suggestions to facilitate physical activity in the workplace that supports better outcomes for both the employee and the organization.

Research Question

What are employees' perceptions concerning how their organization facilitates their participation in physical activity within WWP to provide better outcomes for both organizations and employees?

Limitations

According to Turner (2014), "the grounded theory building process is dependent on the environment, the data available, the researchers, and the problem or phenomenon that is being researched" (p. 37). As a result, within the qualitative research design of this study and due to the research question, several limitations existed that may threaten the internal or external validity of the study. Due to the recruitment methods, the participants may not fully represent the desired population of employees across all types of organizations in the greater Philadelphia region. By allowing participants to self-select to participate in the study and participate voluntarily in WWP, self-selection bias of the participants may skew the findings (Abraham, 2019). Further, given the urban demographics of this region and the qualitative nature of the study, the findings may not generalize to other regions of the country or throughout the world.

Although this study sought to develop a grounded theory to describe participation in physical activity within WWP, the findings were not able to provide causal conclusions. Consequently, this theory was built based on the data from the participants and triangulated information from organizational backgrounds. Testing of the established theory did not occur and is suggested as a focus for future research.

Due to the personal nature of the interviews, the participants may not be able or willing to fully describe their experiences with physical activity or WWP. This, in turn, limited the data available from personal experiences of the employees to derive the theory. Additionally, since the research design does not focus on a specific organization or set of organizations, data collection for triangulation was somewhat difficult to acquire and may have thwarted efforts to validate the findings (Creswell, 2013). Therefore, efforts were made to collect data from the employees, publicly held resources about organizations, and additional research to cross-check the theory.

Due to the nature of qualitative research, the researcher played a major role in the data collection and analysis through reflexivity, or how the researcher “position[s] themselves” within the research design (Creswell, 2013, p. 47). Due to the potential for researcher bias, the researcher maintained an awareness of personal assumptions that may undermine the findings (Merriam & Tisdell, 2016). Through “sensitivity, or insight into the data,” the researcher also sought to understand the assumptions that were brought into the analysis through immersion with the data (Corbin & Strauss, 2008, p. 41). The researcher made every attempt to control biases and the potential impact of reflexivity on the research findings. Consequently, the researcher regularly wrote memos on potential biases and the impact on the study throughout the process of data collection and analysis

(Corbin & Strauss, 2008). In conjunction with conversations with the dissertation chair, these reflections enabled the researcher to remain objective and attempt to control for confirmation bias throughout the analysis.

Delimitations

Overall, the study was delimited through the focus on individual employees within organizations that offer WWP. As a result, inferences about the perceptions of employees at organizations that do not have WWP could not be made. Additionally, by interviewing the employees in the virtual setting, the environment was not standard across all interviews. Also, moderating factors were more difficult to control since the interviews were not conducted in the standardized environment of a laboratory. On the other hand, the scope of the research question precluded assessing the organization or the quality of the WWP itself. Since numerous other research studies have focused on these aspects of WWP, assessment of the WWP was outside the scope of this study.

Although a qualitative design was selected to elicit the personal perspective of the employees, this design limited the implementation and functionality of the potential outcomes. As a result, the researcher sought to “include as many different perspectives on an issue or topic as feasible” (Corbin & Strauss, 2008, p. 273). Since quantitative methods were not used to collect data or test the emergent theory, like in a mixed-methods design, subsequent research will need to be conducted to test the theory and its applicability within the workplace.

Within qualitative research, theoretical frameworks “provide a conceptual guide for choosing the concepts to be investigated, for suggesting research questions, and for framing the research findings” (Corbin & Strauss, 2008, p. 39). By using the lenses of

SEM and SDT, prior knowledge of these theories had the potential to limit insights into the development of the theory. When considering these perspectives, the researcher could potentially miss important data, miscode the themes, or misinterpret the findings, which may have been more clearly developed using another theoretical framework. Therefore, prior to finalizing the theory, additional literature was reviewed to compare the findings to other research and confirm the resulting theory, through the triangulation process.

Definition of Terms

Culture of Health. A workplace environment in “which individuals and their organizations are able to make healthy life choices within a larger social environment that values, provides, and promotes options that are capable of producing health and well-being for everyone regardless of background or environment,” according to the Robert Wood Johnson Foundation (as cited in Goetzel et al., 2014, p. 930).

Employee benefits. “Non-wage compensation or rewards given to employees” (Phillips & Gully, 2019, p. 340). These are typically indirect forms of compensation that make up the employee’s total compensation package and are used in attracting and retaining employees. Benefits typically include health insurance, sick and vacation leave, retirement savings plans, tuition reimbursement, and workplace wellness programs.

Employee health. An outcome based on the health of an employee, which is influenced by stress, obesity, and depression (Phillips & Gully, 2019). Healthier employees are more productive, take fewer sick days, and are at lower risk for serious health problems.

Employee wellness programs. “Any initiative designed to increase company performance or employee performance or morale through improved employee health” (Phillips & Gully, 2019, p. 374).

Health climate. “Employee perceptions of active support from co-workers, supervisors, and upper management for the physical and psychological well-being of employees” (Zweber et al., 2015a, p. 250).

Physical activity. A broad term that encompasses “all forms of human movement” that involve contraction of muscles (Berger et al., 2015, p. 5). Play, exercise, and sport are forms of physical activity and can be found along a continuum of activity, based on competitiveness. Physical activity is considered a modifiable health behavior that can reduce the risk for chronic disease and lifestyle-related diseases.

Well-being. “An individual realizing his/her own capabilities and being able to feel good and function well with the normal stresses of life while working” (Department of Health, as cited in Abdin et al., 2018, p. 71). Many factors influence well-being, such as psychological and social aspects, self-esteem, stress management, and mood alteration, among others. Well-being and physical activity have a bidirectional interplay among their contributing factors and influence each other (Berger et al., 2015).

Wellness. “The integration of social, mental, emotional, spiritual, and physical health at any level of health or illness” (Greenberg, 1985, p. 404). Wellness looks beyond the health to illness continuum and integrates the various aspects of health into one comprehensive model.

Workplace Wellness Program (WWP). An “organized, employer-sponsored program that is designed to support employees (and sometimes, their families) as they adopt and sustain behaviors that reduce health risks, improve quality of life, enhance personal effectiveness, and benefit the organization’s bottom line” (Berry et al., 2010, p. 104). According to Abraham (2019), WWP is “a coordinated set of activities that support employees in making changes to health behaviors that may reduce their risk for certain chronic conditions and enable employees with existing diagnoses to manage them more effectively” (p. 1462).

CHAPTER 2: LITERATURE REVIEW

The review of literature sought to identify and assess the relevant research related to Workplace Wellness Programs (WWP) and physical activity within the workplace to develop an appropriate research question. WWP were examined through the lens of two theoretical frameworks related to motivation and behavior change – Self-Determination Theory (SDT) and Social Ecological Model (SEM). SDT describes the continuum of motivation from amotivation to extrinsic motivation (regulation) to intrinsic motivation (knowledge, accomplishment, and stimulation) (Silva et al., 2008); SEM focuses on the multiple levels of influence on health behavior change through the interrelationships between individuals and their environment (Bronfenbrenner, 1977). Further, the literature review aimed to examine prior research on the individual employee’s participation within the WWP and ways in which WWP are being used to increase employee’s participation in physical activity, improve the overall well-being of employees, and elicit a culture of health within the workplace.

Methods of Searching

The literature query was primarily conducted through the Summon systems at both Temple University and Rutgers University. The literature was downloaded into Box for retrieval. The search included peer-reviewed articles from 2015 to the present. Older articles were also considered to provide the context on the development and evolution of WWP, particularly the Total Worker Health Program from the National Institute for Occupational Safety and Health (NIOSH). Additional research was pulled from the Centers for Disease Control and Prevention (CDC) and CDC-partnered academic

research centers, particularly the Institute for Health and Productivity Studies (IHPS) at Johns Hopkins University's Bloomberg School of Public Health.

The search of relevant literature focused on various key terms relevant to this research study: *workplace wellness programs, physical activity, culture of health, human resource management, supervisory support, behavior change theory, health, and wellness*, among others.

Physical Inactivity, Health Risks, and Wellness

Physical Inactivity

Since the early 1950's, researchers started linking physical inactivity and chronic disease risk, particularly of non-communicable diseases, such as coronary heart disease, breast and colon cancers, and type 2 diabetes. Jeremiah "Jerry" Morris and his research team conducted the first, landmark epidemiological study on this link, which investigated coronary heart disease among different occupations within the London Transport (Morris et al., 1953; Lee et al., 2012). Although the results from numerous studies have shown this link, most of the world's population continues to remain physically inactive.

Lee et al. (2012) assessed the population attributable fraction to "estimate the risk factor on disease incidence in a population" (p. 219). This model estimates that 6-10% of non-communicable diseases cited above and 9% of premature mortality are caused by physical inactivity worldwide (Lee et al., 2012). These findings indicate that physical inactivity is on par with the established risk factors for other non-communicable diseases, such as smoking and obesity.

Although physical inactivity is slowly starting to decrease according to the CDC (2018), physical activity is a *modifiable* health behavior that can reduce the risk for

chronic disease and lifestyle-related diseases. Since the 1970's, physical activity has been associated with positive benefits, including higher psychological well-being, reduced stress, enhanced self-esteem, and increased enjoyment. Yet, according to Church et al. (2011), only one in four Americans meet the minimum physical activity standards for aerobic and muscle-strengthening activities, as established by as established by the Department of Health and Human Services (HHS) under the auspices of the Physical Activity Guidelines Advisory Board (Piercy et al, 2018). Although the percentage of U.S. adults who met the Federal physical activity guidelines for aerobic activity has increased since 2006, the percentage was 54.2 percent with a 95% confidence interval, per the findings from the National Health Interview Survey (NHIS; 2018).

According to the *Physical Activity Guidelines for Americans*, to achieve health benefits, adults should perform “at least 150 minutes to 300 minutes a week of moderate-intensity, or 75 minutes to 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity” (Piercy et al., 2018, p.2000). The guidelines also encourage adults to perform muscle-strengthening activities two or more days per week (Piercy et al., 2018). Overall, adults are encouraged to “move more and sit less throughout the day” to gain additional health benefits from being physically active (*Physical Activity Guidelines for Americans*, 2018, p. 8).

Barriers to Participation in Physical Activity

Due to the numerous sources, various studies have tried to ascertain individual barriers to participation in regular physical activity. Generally, barriers were specific to the individual, and can be internally or externally focused. Various personal factors, such

as age, gender, ethnicity, socioeconomic status, and educational level, among others, and cognitive variables, like self-motivation, self-efficacy, and knowledge of physical activity, can impact exercise adherence. Additionally, past participation in physical activity and the individual's level of motivation and energy were key predictors of physical activity adherence.

The four main barriers to physical activity were: “exercise milieu, time expenditure, physical exertion, and family discouragement” (Sechrist et al., 1987, as cited in Bowles et al., 2002, p. 464). Exercise milieu, or environment, encompasses the access to facilities, the inconvenient location of the facilities, or the cost of places to exercise. Time expenditure included perceived lack of time and time in which participants are pulled away from family, work, or social activities. Lack of social support can be compounded when the individual received discouragement from their family, particularly when the individual started to change their normally perceived behaviors, which resulted in physical changes as well.

Participants tended to focus on their lack of energy, as perceived from the physical exertion of performing physical activity and the fatiguing nature of exercise. Fear of injury also stifled individual motivation to be physically active. Although prior experience was typically a motivator for exercise adherence, past injuries or bad experiences potentially served as barriers to current and future behaviors. Of the barriers cited previously, Bowles et al. (2002) found that perceived lack of time was cited as “the most frequently cited barrier” (p. 468).

In a study of exercise adherence, Forkan et al. (2006) examined the factors impacting adherence to a prescribed physical activity plan, called Home Exercise

Program (HEP), after the participants were discharged from physical therapy. The results showed that “barriers, rather than motivators, are more important in determining exercise adherence” (p. 401). Although the survey was conducted among older adults who specifically had impaired balance, when considering the previously cited barriers, this finding can be generalized to the normal population.

Although the previously cited research may seem outdated, the same barriers continue to arise in more recent literature. According to Patay et al. (2015), through interviews with participants, the most cited barriers to participating in physical activity included “(a) lack of time, (b) social influence, (c) lack of energy, (d) lack of motivation, (e) fear of injury, (f) lack of skill, (g) lack of resources, (h) weather conditions, (i) travel, and (j) family obligations” (p. 498). To overcome these barriers, the workplace has often been seen as a viable option for physical activity, due to the amount of time spent at work (Bailey et al., 2018). The viability of the workplace for supporting physical activity is investigated and reported later in this chapter.

Wellness, Well-being, and Employee Health

According to Greenberg (1985), “wellness is the integration of social, mental, emotional, spiritual, and physical health at any level of health or illness” (p. 404). Wellness looks beyond the health to illness continuum and integrates the various aspects of health into one comprehensive model. Regardless of the health of an individual, he/she may be considered well. Therefore, the multifaceted aspects for each individual need to be considered when assessing wellness. As an extension of wellness, the Department of Health refers to well-being as “an individual realizing his/her own capabilities and being

able to feel good and function well with the normal stresses of life while working” (as cited in Abidin et al., 2018, p. 71).

Within the workplace, employee health is influenced by stress, obesity, and depression (Phillips & Gully, 2019). Healthier employees are more productive, take fewer sick days, and are at lower risk for serious health problems. According to Miller (2015), the non-profit Health Enhancement Research Organizations (HERO) conducted a survey of 500 U.S.-based business leaders. From the results, most of the leaders viewed employee health as an investment in human capital, rather than focusing on the financial return on investment (ROI). Overall, the leaders recognized that employee health improves performance – both on and off the job (Miller, 2015).

Although the importance of employee health and wellness continues to rise, physical activity within the workplace has declined, which may be a factor influencing the increased weight gain in the U.S. (Gu et al., 2014). Specifically, according to Church et al. (2011), using the “validated energy balance differential equation model,” the estimated daily occupation-related energy expenditure has decreased by more than 100 calories in the last five decades; this data was drawn from the U.S. National Health and Nutrition Examination Surveys (NHANES; p. 2). The reduction in private industry jobs that require at least moderate intensity physical activity was a primary reason for this reduction (Church et al., 2011).

Since time at work represents the largest segment of waking hours, the workplace has the potential to provide an environment that supports healthy behaviors. The workplace can also be a useful vehicle for encouraging active lifestyles and facilitating the ability of employees to meet the HHS’s physical activity guidelines. As a result of

these influences, Workplace Wellness Programs (WWP) have developed and evolved over the years.

Workplace Wellness Programs

During the early 1920's, employers in the United States primarily focused on the occupational safety of employees, particularly in hazardous work environments. These initiatives typically resulted from union activism and federal legislation. Around the 1950's, the current fitness movement launched. Observance of the connection between physical activity and chronic diseases can be traced back to this period, particularly through the landmark study of London Transport workers (Morris et al., 1953). At the same time, with automation and advances in technology, the physical demands of work decreased and created a reduction in daily occupation-related energy expenditure (Church et al., 2011). Another study investigated the energy expenditure during brief periods of sitting, standing, and walking. "Comparing across experimental conditions, standing had a nonsignificant increase in energy cost compared with sitting" (Creasy et al., 2016, p. 577). Since employees' primary behaviors center around sitting and standing, these results further point to the decreased energy expenditure within the workplace.

During the 1980's and 1990's, to facilitate education on the physical activity levels necessary to ensure health and to improve productivity, Employee Health Management Programs (EHMPs) started to appear within organizations. According to Wolfe et al. (1994), EHMPs were defined as "ongoing organizational activities designed to promote the adoption of personal behaviors conducive to maintaining and/or improving employee health" (p. 23). EHMPs provided several organizational benefits, including reduced healthcare and health-related costs, decreased recruitment costs, and

enhanced employee performance. These programs also helped to mitigate domestic and global competition and manage employee stress that resulted from technological changes and the pursuant reliance on fewer employees within the workplace (Wolfe et al., 1994).

This focus on employee health and wellness, particularly within the workplace, has continued into the present. Interestingly, many of the findings from the original researchers are still relevant today, though current WWP have expanded to incorporate fitness, health promotion, and wellness facets. Specifically, comprehensive wellness programs encompass fitness, psychological, and educational aspects (Parks & Steelman, 2008). Although no standard definition of WWP yet exists, several researchers provided the following interpretations:

- Employee wellness programs are “any initiative designed to increase company performance or employee performance or morale through improved employee health” (Phillips & Gully, 2019, p. 374).
- A workplace wellness program is an “organized, employer-sponsored program that is designed to support employees (and sometimes, their families) as they adopt and sustain behaviors that reduce health risks, improve quality of life, enhance personal effectiveness, and benefit the organization’s bottom line” (Berry et al., 2010, p. 104).
- WWP “include a coordinated set of activities that support employees in making changes to health behaviors that may reduce their risk for certain chronic conditions and enable employees with existing diagnoses to manage them more effectively” (Abraham, 2019, p. 1462).

Beyond occupational safety of the employees, WWP provided services that support health behavior change to reduce the employees’ risk for chronic diseases and improve well-being. These activities typically functioned to sustain the organization’s overall strategic priorities.

As defined by the *Healthy People 2010*, comprehensive WWP incorporated five key elements, including:

1. Health education (i.e., skill development and lifestyle behavior change, along with information dissemination and awareness building),
2. Supportive social and physical work environment (i.e., support of healthy behavior and implementation of policies promoting health and reducing risk of disease),
3. Integration (i.e., integration of the program into the organization's structure,
4. Linkage (i.e., linkage to related programs such as employee assistance programs), and
5. Worksite screening and education (i.e., programs linked to appropriate medical care). (Linnan et al., 2008, p. 1503-1504)

In addition to providing comprehensive WWP, through the *Healthy People 2020*, the Office of Disease Prevention and Health Promotion set out to “increase the proportion of employees who have access to workplace programs that prevent or reduce employee stress” to 40 percent, from the baseline of 36 percent in 2010 (OSH-9, 2019). According to the CDC, at their core, wellness benefits offered by employers aided in reducing “the likelihood of employees developing four of the 10 most costly health conditions for U.S. employers—angina pectoris (chest pain), high blood pressure, diabetes, and heart attack” (as cited in Employee Benefits Survey, 2018, p. 9). These findings suggested that the use of WWP translated to savings of approximately \$1,685 per employee each year by reducing missed work and the associated losses in productivity (Employee Benefits Survey, 2018).

Total Worker Health Program

Starting in 2003, the National Institute for Occupational Safety and Health (NIOSH) focused on extending their original goal of occupational safety to advocate for the promotion of employee health and well-being within the workplace. In 2011, the

Total Worker Health (TWH) program was established from these efforts. The TWH approach “is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness-prevention efforts to advance worker well-being” (NIOSH, 2016, p. 1). By focusing on the environment within the workplace, the NIOSH focused on improving work conditions through policies, practices, and programs to both “protect workers and advance their health and well-being.”

The initial 20 guiding principles for the TWH program were established at a workshop of industry experts in 2007. In 2016, these principles were refined to five defining elements on a practical level that should be used when implementing a TWH program. These items should:

1. Demonstrate leadership commitment to worker safety and health at all levels of the organization.
2. Design work to eliminate or reduce safety and health hazards and promote worker well-being.
3. Promote and support worker engagement throughout program design and implementation.
4. Ensure confidentiality and privacy of workers.
5. Integrate relevant systems to advance worker well-being. (NIOSH, 2016, p. 3)

Due to the unique nature of each workplace, these elements were meant to be assessed for each workplace and should align with each environment and culture.

Anger et al. (2015) conducted a meta-analysis to determine the effectiveness of interventions based on TWH principles. To be included, a study had to incorporate: (1) interventions that employed *both* occupational and/or health and wellness and/or well-being and (2) outcomes on *both* occupational safety and health (OSH) and health protection (HP). After a thorough search, only 17 published studies across various

industries and countries met all criteria. “All but one of the 17 TWH intervention programs improved outcomes that are risk factors for injuries and/or chronic diseases and four improved 10 or more risk factors” (Anger et al., 2015, p. 244).

These results indicated that the principles of the TWH, when implemented properly, can reduce risk factors for chronic diseases, while also addressing injuries among the workforce, regardless of the industry. From these findings, the authors suggested that the impact of the TWH program should be measured on improvements in employee health and reductions in accidents, rather than solely on cost savings. Further, “good workforce health is in the interest of both industry and employees (from the shop floor to the boardroom), and to the nations where they live” (Anger et al., 2015, p. 244).

Rationale for Implementing and Maintaining WWP

Since the early 1990’s, various researchers have studied the impact of WWP on the workplace. According to Wolfe et al. (1994), WWP, also known as Employee Health Management Programs (EHMPs), decreased recruitment costs by “influencing the attractiveness of an organization to recruits and decreasing absenteeism and turnover” (p. 31). Furthermore, WWP decreased healthcare costs, enhanced performance among employees, and increased the organization’s competition globally and domestically, among others (Wolfe et al., 1994).

According to Parks and Steelman (2008), WWP was associated with a more favorable work culture and can be employed as a recruitment and retention tool. Candidates tended to assess wellness as part of the overall benefits structure when selecting an organization to join. Wellness programs also improved employee health and, in turn, decreased rates of illness-related absenteeism. Through a meta-analysis of studies

on employees' participation in WWP, those employees who participated in WWP reported higher job satisfaction, resulting from employees' positive affect related to the job. WWP tended to make employees feel physically better, which resulted in a positive impact on their affect and general happiness (Parks & Steelman, 2008).

Along these lines, Berry et al. (2010) found that WWP lowered attrition rates and minimized "presenteeism," which occurs when an employee goes to work despite an illness or other medical conditions that inhibit them from functioning fully (Hemp, 2004). According to Phillips and Gully (2019), additional outcomes based on comprehensive WWP encompass: reduced injuries; improved morale and loyalty; improved employee productivity; and reduced worker's compensation and disability-related costs, among others. Other studies have demonstrated that WWP also supported stronger employee engagement, reduced turnover, and improved profitability (Abraham & White, 2017).

From decades of research conducted by the Johns Hopkins Bloomberg School of Public Health's Institute for Health and Productivity Studies, Goetzel et al. (2014) sought to answer the question "do workplace health promotion (wellness) programs work?" The researchers addressed various aspects of this question, ranging from outcomes and assessments to effective programs that develop a culture of health. From their findings, programs that were established on evidence-based principles and were well-designed and executed achieved positive health results for the employees and financial outcomes for the organization. Further, well-executed programs elicited "improvements in health and well-being of workers; cost savings through appropriate use of health care services; and enhanced individual and performance metrics" (Goetzel et al., 2014, p. 929).

According to Miller (2015), the results of the Health Enhancement Research Organizations (HERO) survey illustrated that 500 U.S.-based business leaders agreed that employee health influenced the company's top organizational priorities. These priorities included productivity (quantity of work); performance (quality of work); employee engagement or morale; benefits cost reduction; and safety (Miller, 2015). Consequently, WWP should reflect the organizations' value proposition and should be positioned appropriately within the organization to achieve the organizational goals.

To examine the effects of wellness programming, Song and Baicker (2019) partnered with a large U.S. warehouse retail company to conduct a randomized control experiment. Twenty worksites (4,037 employees) were randomly selected to receive the intervention, and 140 worksites (28,937 employees) were randomly selected as the control and did not receive the intervention. Registered dietitians provided the wellness programming intervention, which was composed of eight modules on nutrition, physical activity, stress reduction, and related topics. Various outcome measures across four domains were used in the analysis, consisting of: self-reported health and behavior survey; health screenings; health care spending and utilization; and employment administrative data. After 18 months, only two of the specific outcomes – engaging in regular physical activity and actively managing weight – were significantly higher in the intervention group compared to the control worksites. The other health behaviors, healthcare costs and utilization, and employment outcomes did not show significant differences between the intervention and control groups. Although these results showed positive health behavior changes, according to Song and Baicker (2019), “these findings may temper expectations about the financial ROI that wellness programs can deliver in

the short term” (p. 1491). As a limitation, the authors also noted that since the intervention was implemented at the worksite level, changes within the workplace culture to provide better social support at the individual level may have facilitated greater behavior change. Since the study was limited to a single company, the results may not be generalizable to other settings or populations.

The ROI of a WWP was typically expected to meet high financial standards, though Goetzel et al. (2014) noted that “few employer-provided benefits are expected to produce a positive ROI” at the high rate proposed for WWP (p. 928). From their findings, WWP should be part of the overall organization culture. Consequently, the focus should be on the investment in human capital, rather than financial gains. With an appropriate plan for the WWP, the organization will be able to establish a culture of health that is ingrained in the organization’s norms, values, and beliefs.

Since the findings from the research on financial ROI have often been inconclusive, Abraham and White (2017) explored other types of economic outcomes from offering WWP. Through 24 semi-structured interviews, the heads of wellness companies discussed the need for a shift in focus from ROI to an increased value on the investment in the “broader set of economic benefits for the organization” (p. 223). These items included reduced health care costs, improved productivity, and enhanced organizational performance. Overall, WWP appeared to provide a longer-term impact on employee health and wellness. Consequently, WWP can make an impact in the workplace by enabling employees to make healthier choices, which will ultimately support an organizational culture of health (Abraham, 2019). As a result, these companies should focus on the assessment of their programs and the use of innovative and novel

program designs and specific interventions to facilitate participation among employees (Abraham, 2019).

Aspects of Effective WWP

Due to the focus on the ROI of WWP, organizations and researchers often identified the aspects of an effective WWP. Overall, several individual and organizational factors were regularly revealed. Individual factors included motivation, past experiences, and dispositional characteristics, while organizational factors encompassed supervisor support, coworker's perceptions, and the organizational climate. When developing or assessing the quality of WWP, these factors, particularly those related to behavior change, were examined.

Within Health and Productivity Management (HPM) Programs, “employers established policies to reinforce the desired behaviors” (Goetzel et al., 2007, p. 120). Although this study occurred in 2006-2007, the strategies determined from the interviews, surveys, and site visits are like those found by the RAND Institute, as cited above. These strategies include communication, organizational policies, and funding from the government. These findings also suggest that effective WWP should be embedded in the infrastructure of the organization, through compensation practices, benefits, policies, and the physical environment.

Berry et al. (2010) studied 10 organizations that offer financially-sound WWP. Through various field visits, including both interviews and focus groups, this study examined the ways in which companies can support the well-being of their employees,

while maintaining the organization's bottom line. Over 300 employees participated in the study, including:

Senior executives (including the CEO and CFO in most cases); wellness managers and staff; managers of related functions, such as HR, occupational health, employee assistance services, on-site medical clinics, fitness centers, safety, and food service...middle managers, employees who actively used the programs, and employees who chose not to participate in the programs. (Berry et al., 2010, p. 112)

From this study, Berry et al. (2010) identified six pillars that were essential to a successful and strategically integrated WWP. These pillars are:

1. Multilevel leadership
2. Alignment with company's identity and aspirations
3. Scope, relevance, and quality
4. Accessibility
5. Partnerships (both internal and external)
6. Communications (tailored for intended audiences) (p. 110-112)

In addition to these general pillars, when structuring a WWP, employers should consider different features to be incorporated into the program. According to Bray (2016), six key ingredients were needed for a successful WWP. These ingredients were: "(1) health screenings, including health risk assessment (HRA) and biometric testing; (2) educational and self-help tools; (3) organized activities; (4) individual follow-up and treatment; (5) incentives; and (6) supportive environment" (Bray, 2016, p. 39-41).

From the 2018 Society of Human Resource Management (SHRM) Survey, over the prior year, organizations continued decreasing preventative programs, while substantially increasing their wellness benefits. These benefits consisted of company-organized fitness competitions/challenges, CPR/first aid training, and standing desks (Employee Benefits Survey, 2018). These results demonstrated the increased focus on an

organizational culture of health, rather than solely focusing on the financial ROI and reduction in direct healthcare costs.

Kadushin et al. (2016) conducted a survey of West Virginia state employees to assess the employees' preferences for wellness programming and communication. Generally, the participants had low previous familiarity with wellness programming. Although the participants noted high overall interest in WWP, they had limited experience with WWP. From the survey results, Wellness Programming should be:

- Tailored to meet the needs and desires of employees.
- Inclusive of adequate education on the services, feedback on progress, and coaches.
- Offered through convenient programming, particularly through onsite fitness programs. (Kadushin et al., 2016)

The survey results emphasized the importance of meeting in-person with wellness professionals and the need for multiple communication methods to reach employees and promote services. In terms of communication, participants rated personalized webpages as the highest desired method for information delivery (Kadushin et al., 2016).

Through 24 semi-structured interviews, Abraham and White (2017) explored changes in the wellness marketplace from the perspective of leaders in independent and health plan-based wellness companies. Larger companies tended to purchase the wellness services from independent wellness companies, while small and mid-sized companies typically worked with the health plan providers to bundle the wellness services with other insurance offerings. The independent wellness companies were well-established and focused on the use of evidenced-based programming from the occupational health and healthy psychology fields, while new companies relied on technology-based offerings, such as online portals and data analytics of employees' data. Due to the complexity of

these online systems, some of the traditional wellness companies outsourced the technology platforms from these companies (Abraham & White, 2017).

Prevalence of WWP

Various organizations, such as the RAND Corporation and the SHRM, have studied the prevalence of WWP throughout the United States. These surveys focused on U.S. employers to assess both the number of organizations and the types of services offered through the WWP. In the U.S., several national studies have been conducted to investigate worksite health promotion in 1992, 1999, and 2004, respectively.

From this data, Linnan et al. (2008) examined the prevalence of WWP, particularly those considered “comprehensive.” In 2004, the survey was conducted through 1,553 phone-based interviews with a cross-section of 730 U.S. private and public worksites, which were pulled from Dun & Bradstreet’s database. The worksites were from various industries and different sizes. The respondents had a role in the WWP or were familiar with the worksite’s offerings, were primarily directors or managers (60.5%), and worked within the human resources or benefits departments (52.7%). Overall, “only 6.9% of the worksites offered a *comprehensive* worksite health promotion program” (Linnan et al., 2008, p. 1507).

According to the RAND WWP Study, “about half of employers with at least 50 employees, and more than 90 percent of those with more than 50,000 employees, offered a wellness program in 2012” (Mattke et al., 2013, p. 1). The percentage of firms offering WWP increased as the number of employees increased, such that organizations with 50 or more employees provided access to wellness programs to “more than three-quarters (79 percent) of employees” (Mattke et al., 2013, p. 19).

The SHRM completed a National Study of Employers, focusing on various benefits offered to employees (Matos et al., 2017). Through a trend analysis, wellness programs experienced a 17% spike between 2005 and 2012 to a high of 63%. A potential reason for this spike was the recession and the need for employers to provide additional non-traditional benefits to employees. This percentage leveled out at 61% of the companies surveyed in 2016.

In 2018, the SHRM conducted its annual Survey of Employee Benefits among U.S. employers. Of the companies surveyed, “three-quarters (75%) of employers offer wellness resources and information and/or a general wellness program” (Employee Benefits Survey, 2018, p.9). However, only 62% of these employers provided general wellness programs. According to SHRM’s findings, wellness needed to be part of the broader value proposition as an investment in human capital, not just about reducing healthcare costs. Consequently, executives and managers should focus on developing a supportive organizational culture that incorporates health and wellness.

Impact of Changing Legislation

Various government agencies, such as the U.S. Departments of Labor, Health and Human Services, and the Treasury, provided guidance on the administration of wellness programs. Additionally, organizations need to comply with the following legislative acts:

- Patient Protection and Affordable Care Act (ACA)
- Health Insurance Portability and Accountability Act of 1996 (HIPAA), particularly provisions related to non-discrimination
- Americans with Disabilities Act (monitored by the Equal Employment Opportunity Commission; EEOC)

Specifically, the ACA encouraged health behavior change of employees by “providing technical support, issuing regulations for health-contingent program designs,

and increasing incentive levels that employers could use as part of their health benefits management strategy” (Department of Labor, as cited in Abraham & White, 2017, p. 222). Rather than the financial incentives on which organizations tend to focus, the ACA aimed for employers to adopt wellness programs that focus on improving the health of the employees and preventing disease that are fully embedded in the organizational culture (Kent et al., 2016).

As a result of these regulations, companies need to assess several key legal considerations when developing a WWP (Plump & Ketchen, 2016). Overall, the organization needs to ensure that the wellness programs improve employee health and are truly voluntary. Organizations should be cautious about including dependents in wellness programs. Throughout the development and implementation process, organizations need to collaborate with disabled employees to meet their needs and provide clear, written explanations when asking for medical information. Finally, organizations should take extra precautions to ensure that medical information is kept confidential.

Physical Activity Interventions Within Workplace Wellness Programs

To reach physical activity goals, various researchers have examined physical activity interventions within the workplace. These studies used diverse interventions; some of which were based in behavior change theories, while others were based on exercise psychology principles. Additionally, the studies utilized varied research designs, including qualitative, quantitative, and mixed methods. The results were diverse in terms of the outcomes measured, such as health-related, well-being, and productivity, among others. One major barrier to randomized trials within the physical activity-based literature

was that these types of studies are often “not well accepted in business environments” (Goetzel et al., 2007, p. 116).

According to Cooley et al. (2014), for an intervention to be successful in changing health outcomes, the intervention should address multiple factors and their impact on health decisions. This perspective on health behavior change stemmed from the Social Ecological Model (SEM), based on Bronfenbrenner’s research, which focused on the interrelationships between individuals and their environments across four interconnected levels, including: microsystem (individual), mesosystem (relationship), exosystem (community), and macrosystem (societal). Their study used both quantitative and qualitative methods to assess an e-health intervention, called Exertime, which sought to increase periods of non-purposeful physical activity to reduce employee’s prolonged sitting time at work. Every 45 minutes, the software automatically deactivated the participant’s computer screen, and elicited the participant to perform physical activity, either by watching a video or completing a non-purposeful activity. When the screen reactivated, the software prompted the participants to self-report the amount of activity conducted for tracking.

After the 13-week intervention period, qualitative responses from the 46 participants were collected through semi-structured interviews to evaluate the outcomes of participation in the intervention (Cooley et al., 2014). The questions examined the individual (microsystem), workgroup (mesosystem), and organization (exosystem) levels of the SEM; the societal (macrosystem) was not included in the interview questions, as this was beyond the scope of this study.

With the support of the leadership to permit the software installation, the participants felt supported to focus on changing their health behaviors by increasing their physical activity, regardless of the level and type of activity. The interplay amongst the above SEM levels created an environment in which the employees were able to change their behavior, which further impacted the supportive environment within the workplace (Cooley et al., 2014). The intervention also increased the participants' awareness of prolonged sitting, which triggered them to participate in more leisure-time physical activities outside of the workplace. These results illustrated that education on non-purposeful activity may enable non-exercisers to start participating in regular activity. However, the participants also noted that the intervention disrupted their normal work activities; therefore, the long-term positive effect and sustainability of such an intervention in the workplace were questionable (Cooley et al., 2014).

Abdin et al. (2018) conducted a systematic review of physical activity-based interventions that focused on improving well-being in the workplace. Through their literature review, five such studies were identified; three of which were considered high quality, using Cochrane's risk of bias tool. The studies used a variety of interventions, including one exercise-based, one yoga-focused, and three walking studies. The settings were also diverse, which included three universities across Europe and Australia. Each study collected diverse data on the effectiveness of the intervention, particularly related to well-being; however, most of the studies did not use a control group with an active placebo and several faults in the methodology for these studies were also cited. Further, the physical activity interventions were not based on a theoretical framework or behavior change theory-based techniques. As a result of these shortcomings, "the evidence [of the

systematic review] can only conclude something is better than nothing” (Abdin et al., 2018, p. 73).

Recognizing some of the pitfalls in prior research, Thogersen-Ntoumani et al. (2014) conducted a feasibility trial of a 16-week intervention of lunchtime walking among physically inactive University employees. Inactive participants were targeted, since prior research identified this group as an underrepresented population (Hutchinson and Wilson, 2012, as cited in Thogersen-Ntoumani et al., 2018). The intervention was based on prior studies focusing on walking interventions, rather than health behavior change models. The researchers focused on the outcome measures related to work and performance, such as health perceptions, subjective vitality, affect at work, and global work performance. The item on global work performance was derived from one question on the World Health Organization Health and Work Performance Questionnaire (WHO HPQ; Kessler et al., 2003, as cited in Thogersen-Ntoumani et al., 2018); the selected question asked about overall performance in the last seven (7) days. The measures were collected at baseline, post-intervention, and a four-month follow-up. Over this timeline, work performance and subjective vitality significantly increased, while fatigue significantly decreased over time. Improved health perceptions were a result of the workplace walking intervention, specifically for participants who were previously inactive. These results demonstrated the effectiveness of the walking intervention, particularly across different seasons. One limitation of this study was the reliance on retrospective recall, particularly for the well-being and performance measures, rather than specific measures of activity levels (Thogersen-Ntoumani et al., 2018).

Given the results of prior studies, according to Cooley et al. (2014), the subjective outcomes of qualitative health research may be more informative in physical activity interventions. In addition to quantitative results collected from the Exertime software previously discussed, qualitative responses were used to evaluate the outcomes of participation in the intervention. The results of this study provided a multilevel perspective on health behavior change within the workplace and demonstrated the importance of collecting qualitative responses from participants. The qualitative outcomes illustrated the depth of the participants' experience, particularly related to changes in the work environment and their expanded understanding of non-purposeful physical activity from the intervention, beyond the quantitative summary of the minutes and types of physical activity completed (Cooley et al., 2014).

Barriers to Participation in Regular Physical Activity in the Workplace

Besides the typical barriers to physical activity, the workplace forged its own set of barriers. Since the early research of the 1990's, lack of time during the workday was one of the most common reasons for not participating in wellness programs within the workplace (Wolfe et al., 1994). Additional barriers to participation included trust, money (co-pay), and stress, among others. Further, from a survey of West Virginia state employees, a significant barrier to participation was a lack of knowledge about wellness program (Kadushin et al., 2016). Technology, time, and access to programming were also mentioned as barriers.

From the 2004 National Worksite Health Promotion Survey, several barriers and challenges to the success of WWP were reported. These items included: "lack of employee interest (62.5%), staff resources (50.1%), funding (48.2%), participation on the

part of high-risk employees (48.0%), and management support (37.0%)” (Linnan et al., 2008, p. 1504). Of the participating employers, only 19.6% provided physical activity programming within the WWP, and most did not provide an environment that was supportive to participating in physical activity, such as onsite fitness facilities, shower facilities, and/or walking trails. As the number of employees increased, the likelihood of the employer offering a supportive environment also increased. However, employers in the current survey reported “significantly more perceived barriers” than the employers from the previous survey in 1999 (p. 1508). Most of the individual barriers cited above also had significantly higher rates.

To understand motivators and barriers to physical activity in the workplace, Bredahl et al. (2015) conducted semi-deductive, structured interviews with 18 office workers who also participated in the VIMS study from six different workplaces in Denmark. One week after the completion of the intervention, these informants were recruited due to their ability to express their emotions through purposeful sampling. The researchers investigated the organizational factors, implementational factors of the intervention, and individual factors that impacted the motivation and barriers for workers’ compliance to the VIMS intervention of weekly physical activity in the workplace. After the interviews, the data was coded deductively. A limitation of the participant pool was that the informants already volunteered to participate in the VIMS study. Consequently, some of the results may be skewed, because another group of informants pulled from VIMS may have provided different responses (Bredahl et al., 2015).

Support and acceptance from the leading authorities in the company was found to be one of the most important motivating factors (Bredahl et al., 2015). Other motivators

were flexibility in job planning to include the 20-minute intervention, meeting colleagues outside their normal work environment at the gym, and the social environment of co-workers who supported and reminded them to exercise. Conversely, lack of flexibility was a major barrier; other barriers included urgent tasks, deadlines, unpredictability of their job tasks, and general busyness. Some of the informants noted that these barriers forced them to hurry through the physical activity program when they were able to exercise during the workday. A guilty conscience and pressure to complete tasks from colleagues were also identified as barriers. Ultimately, “the interaction between the individual and the environment seems to be a stronger predictor of compliance than individual factors alone” (Bredahl et al., 2015, p. 10).

According to Wolfe et al. (1994), one shortfall of participation in WWP was that actively engaged individuals tended to be better performers prior to the implementation of the program. Positive results from the WWP were a function of the participants’ personality, perspective on program participation, and positive work habits. Since participation in WWP was voluntary, self-selection bias tended to skew the results of most wellness and physical activity interventions within the workplace as well (Abraham, 2019). Further, most of the results were not generalizable to non-participants, who also tended to be non-exercisers.

Considering these barriers, organizations should ensure program accessibility and convenience to facilitate employee participation in the WWP. Further, to incite participation by those who do not typically participate in WWP, Wolfe et al. (1994) suggested including these employees in the planning committees for the WWP, “incorporating activities that can be done on one’s own, providing training in

motivational and relapse prevention techniques, and encouraging social support” (p. 36). Additionally, different worksites may need to provide different types of programming and policies, especially for the smaller employers with less than 500 employees, who are less likely to have comprehensive health promotion plans (Linnan et al., 2008).

Health Climate and Culture of Health

As discussed previously, the workplace play an important role in employee health and wellness. According to Zweber et al. (2015a), health climate is defined as “employee perceptions of active support from co-workers, supervisors, and upper management for the physical and psychological well-being of employees” (p. 250). This definition expands the concept of a healthy organization to include aspects of the organizational functioning, such as norms and values, employee attitudes, social support, and environmental conditions. Within a healthy climate, the employee perceives the organization to value his/her well-being; consequently, the employee will “behave in ways that benefit his or her organization” (Zweber et al., 2015a, p. 251).

By incorporating the perspectives of co-workers, supervisors, and upper management levels, the health climate reflects the multi-dimensionality of the workplace and demonstrates the social context, which is important when considering individual perceptions of the health climate. These perceptions should be shared amongst group members within the organization and should be directly related to positive organizational climate and employee health and well-being (Zweber et al., 2015a). More specifically, to create a high energy workplace, Bray (2016) identified several aspects that need to be incorporated into the work environment. These items included: “allow flex time for fitness activities; encourage use of breaks or lunchtime for fitness activities; make your

stairwells more inviting; have stretch breaks during long meetings; and don't reward employees who put in long hours" (p. 40).

According to the Robert Wood Johnson Foundation, a culture of health

...is defined as one in which individuals and their organizations are able to make healthy life choices within a larger social environment that values, provides, and promotes options that are capable of producing health and well-being for everyone regardless of background or environment. (as cited in Goetzel et al., 2014, p. 930)

From the above research study, a culture of health needs to be "hard coded" into the work environment. This leads employees to perceive a healthy lifestyle as the "default" option (p. 930). Concurrently, organizations need to go beyond checking off the items on the list of comprehensive WWP. The success of a WWP relies on the program's goals, design, implementation, and evaluations and fits into the organization's culture.

From another perspective, a culture of health is an environment that "places value on and is conducive to employee health and well-being" (Kent et al., 2016, p. 117). Beyond a physical environment that promotes healthy choices, a culture of health should be integrated throughout the organization. The study by Kent et al. (2016) pulled data from various sources, including: a comprehensive literature review, three roundtable discussions with 18 expert panels and subject matter experts, and nine site visits to companies who were the winners or honorable mentions of the C. Everett Koop Award or recipients of other worksite health promotion honors. The Koop Award focuses on the improvement of workers' health and other measurable outcomes.

An analysis of this data elicited the key elements that contribute to a culture of health within the workplace. These items included physical environment support, social environment support, leaders, managers, peers, and employee involvement (Kent et al.,

2016). The senior managers emphasized the need to create “a ‘way of life’ in the workplace that integrates a total health model into every aspect of the business practice” (Kent et al., 2016, p. 119). Ultimately, the leaders, managers, and employees each played a role within this culture. Leaders provided the vision and the commitment to health, the managers sought to align resources with the mission, and individual employees were empowered to assume responsibility for their own healthy behavior and well-being.

Additionally, the results indicated that strategic communication was essential to program success through the engagement of the employees. The communication should be based on well-defined objectives, which stem from evidenced-based behavior change theories, such as the Stages of Change Model or the Health Belief Model, among others. Further, the plan should educate by building awareness; motivate and inspire employees to maintain or improve healthy behaviors; market and connect employees to the appropriate resources; and establish trust (Kent et al., 2016). The tailored messages should use a variety of channels and be bidirectional such that the employees are able to provide feedback on their interests, needs, and barriers.

Through the CDC’s National Healthy Worksite Program, Payne et al. (2018) collected data on the employees at the worksites surveyed. In 2013, employees completed baseline biometric screenings and health status and behavior surveys, which were used to assess lifestyle risk in the areas of nutrition, physical activity, and tobacco use; then, a follow-up was conducted in 2015. Overall, 41 employers and 825 employees submitted the data at baseline and follow-up. The employers and employees completed the CDC’s Worksite Health ScoreCard (HSC), which assessed various types of support provided in

the workplace, including environmental, policy, programmatic, leadership, coworker, employee engagement, and strategic communications.

Through their evaluation of the outcomes, Payne et al. (2018) discovered that “perceived support is positively associated with employer-level strategic communication, leadership support, and coworker support. Also, as expected, employee-level leadership support has the largest effect on perceived support” (p. 1561). Support from co-workers was also “positively associated with perceived organizational support for health but not lifestyle risk” (Payne et al., 2018, p. 1563). Although the leadership and coworkers strongly impacted the employees’ perceptions of support for health, the organizational environment and policies were essential for changing employees’ risk behaviors.

To examine the individual and group dimensions, Zweber et al. (2015b) conducted a study of two separate samples and datasets – an individual-level group of 263 correctional officers, which was collected from a long-term study by the Center for the Promotion of Health in the New England Workplace, and a group-level sample of 171 correctional healthcare workers from 42 different workgroups, which was incorporated into the Civility Among Healthcare Professionals multiyear study. For the individual group, a paper-based study was used, which assessed workplace environmental and organizational constructs, such as “ergonomics, workplace behaviors, workplace attitudes, and individual characteristics” (Zweber et al., 2015b, p. 4). For the group-level, an online survey was employed to assess workplace attitudes, behaviors, and beliefs. Both groups also completed the Multi-faceted Organizational Health Climate Assessment (MOHCA), which assessed the health climate from the workgroup, supervisor, and organizational levels.

From the results, high scores in all three of these dimensions resulted in the most beneficial climate for both the employees and the organizations. Additionally, the “findings suggest that the strength in one of the facets alone cannot fully compensate for mediocrity in the other two facets; however, strength in one facet can result in slightly better health and well-being outcomes” (Zweber et al., 2015b, p. 8). These results were important as organizations assessed their overall health climate and sought to develop interventions that enhance employee health and well-being. All levels of the organization should provide support for health and well-being for any WWP and, in turn, the organization to be successful. Organizations should create a culture of wellness in which healthy choices are the norm and co-workers support the maintenance of new behaviors.

Supervisory Support for Health and Wellness

As the previous research has shown, the development of a culture of health should happen across all levels of the organization, encompassing the leadership, managers, and employees. Several studies have specifically investigated the role of supervisors and senior managers in supporting (or hindering) employees’ participation within WWP. Although most supervisors supported WWP and employee health, time constraints, competing priorities, and production conflicts were often cited as barriers. Supervisors were also concerned with overstepping professional boundaries by discussing health and behavior change recommendations with employees.

Through a survey of managers, Linnan et al. (2007) explored managers’ beliefs about WWP. As part of the *Working Healthy Project 2*, a list of manufacturing worksites in New England was pulled from Dun & Bradstreet’s listing of organizations. Of the companies contacted, 24 participated in the study, which had a two-pronged approach.

First, the human resource directors were interviewed on-site. This data was used to prepare a 19-item questionnaire, which was pretested among 30 managers from organizations not included in the study. The letter requesting the employees to participate in the study was co-signed by the project manager of the *Working Healthy Project 2* and the chief executive officer of each organization. Overall, 1047 managers, categorized as 311 line supervisors, 567 middle managers, and 169 top executives and senior managers, completed a survey, which assessed the “importance, efficacy, barriers, and benefits” of the WWP (Linnan et al., 2007, p. 521). Across all levels, most managers believed that offering WWP was highly important (75%) and that WWP improved employee health (80%), reduced healthcare costs (68%), and improved employee morale (67%). However, the senior managers and supervisors had different perspectives on barriers to participation in WWP. Managers believed in offering WWP, but lack of time and production conflicts were the biggest barriers cited to encouraging their employees to participate in WWP. Contrarily, the senior managers were less likely to perceive the barriers to participation, such as space, cost, and productivity (Linnan et al., 2007).

Although all managers believed in protecting their employees, “senior and middle managers were significantly more likely than line supervisors to agree that employers have a responsibility to encourage employees to make healthy lifestyle choices” (Linnan et al., 2007, p. 524). The managers also believed in the importance of providing social support to the employees and implementing health-promoting policies within the organization. By assessing differences by age, experience, and manager level, the results showed that targeted interventions needed to be implemented to address managers’

beliefs, particularly about perceived barriers, across the various levels. In turn, employees at each level should be furnished with a different communication strategy.

From a study by Payne et al. (2018) using the CDC's Worksite Health ScoreCard (HSC), the results showed that at baseline, managers and executives perceived less organizational support for their health than employees with little or no supervisory responsibility. This demonstrated the important role that leaders play in supporting the culture of health through WWP, resource allocation, and healthy lifestyle choices. Consequently, leaders need to ensure that the communication is strategically distributed to reach all areas of the organization.

Through semi-structured, qualitative interviews and supplemental electronic survey, Wieneke et al. (2019) assessed the perceived role of supervisors in employee well-being. Recruitment occurred through an internal email to 2,600 supervisors and department well-being champions at the Mayo Clinic, a non-profit healthcare organization. Thirty supervisors volunteered. Of these, the first 20 to respond were included in the study; 19 of the participants responded to the follow-up survey.

In assessing the supervisor as a "potential agent of change," two primary questions arose:

- (1) What are some of the barriers supervisors face in supporting wellness activities in their work area and what are the needs to address? and
- (2) What do supervisors view as their role in supporting the health and well-being of the staff who report to them? (Wieneke et al., 2019, p. 301)

From an analysis of themes, most of the supervisors noted that they have "abundant resources but limited opportunities to use them," suggesting the top leadership's uneven commitment to employee well-being (Wieneke et al., 2019, p. 304). At the same, supervisors often faced competing priorities between work policies and the need to

accomplish tasks with limited staff, which were often not acknowledged by the leadership. Many of the supervisors felt that time constraints and lack of control were barriers to promoting the workplace wellness initiatives. When considering an on-site healthy living center, the supervisors also noted the need for a “third distinction” of workplace wellness as a physical destination between work and home, which further complicated the demands of the work environment and inhibited work-life balance.

The results also presented a struggle on the responsibility of the employer vs. the employee. Although supervisors felt that their role was to support employees who maintained healthy behaviors, “half of those interviewed mentioned that healthy behavior is a choice and cannot be mandated by organizational leadership or by department supervisors” (Wieneke et al., 2019, p. 306). Furthermore, supervisors considered the potential negative impact of overstepping professional boundaries if behavior, physical appearance, or performance were questioned based on the potential of poor health habits. To overcome these barriers, supervisors identified an overarching “desire for work-life balance, autonomy, and flexibility in work schedules for them and their staff” (Wieneke et al., 2019, p. 307). Overall, these supervisors presented an ongoing conflict with supporting wellness within the workplace, particularly when considering onsite health facilities (Wieneke et al., 2019). The Mayo Clinic has been considered one of the gold standards for healthy behaviors, through its commitment to developing the well-being of its workforce as a strategic priority. Regardless, supervisors identified several barriers for them being able to fulfill this priority among their staff, as cited above. To combat some of the barriers and develop a more holistic approach, a “Supervisor Toolkit” and various workshops were established to enhance the supervisors’ involvement in employee well-

being, particularly in the areas of “awareness and education, leadership competencies, skill building, and prioritizing leadership support” (Wieneke et al., 2019, p. 308). Support of the leadership was also important to balance policies and prioritization of employee work and health-related activities among work and time constraints.

Due to the limited participation from within the organization, the researchers noted the limited generalizability of the findings across other areas of the organization and to other organizations (Wieneke et al., 2019). Although the Mayo Clinic can be considered as a company, the health-focused operations may have also skewed some of the findings, since the participants are already focused on improving well-being and health behaviors. Other limitations included no measurement and assessment of direct behaviors or standardized questionnaires. Since a convenience sample of volunteers was used, the participants also had limited diversity and were primarily women.

These studies illustrated the barriers supervisors faced when trying to encourage and facilitate a culture of health within the workplace. Clearly, the responsibility for employee health reached across all levels of the organization. Nevertheless, how to create this culture remained somewhat elusive in much of the previously cited research. Behavior change strategies, particularly those stemming from individual motivation, may provide a bridge to understanding physical activity participation within the workplace.

Motivation and Behavior Change Theories

Self-Determination Theory

Since the mid-1970’s, Deci and Ryan sought to understand the social-contextual conditions around self-motivation through their development of the Self-Determination Theory (SDT). According to Silva et al. (2008), motivation is considered the

“psychological forces or energies that impel a person toward a specific goal” (p. 2).

Within SDT, three types of motivation exist on a continuum from amotivation to extrinsic motivation (regulation) to intrinsic motivation (knowledge, accomplishment, stimulation) (Silva et al., 2008). These motivation types are exhibited by the perceived forces that incite an individual to act from external sources (i.e., rewards) to internal tendencies to seek challenges and novelty due to the “inherent satisfaction of the activity itself” (Ryan & Deci, 2000, p. 71).

Since extrinsically motivated behaviors tend to not be interesting, “the primary reason people initially perform such actions is because the behaviors are prompted, modeled, or valued by significant others to whom they feel (or want to feel) attached or related” (Ryan & Deci, 2000, p. 73). If rewards, punishments, or self-imposed pressures are used to control behaviors, the behavior typically only lasts as long as the contingency is in place (Silva et al., 2008). Therefore, the goal is for behaviors that are initially extrinsically motivated to become enjoyable and fun such that the individual achieves intrinsic motivation. In the development of PA-based interventions, extrinsic motivation, like monetary incentives, can be used initially until the individual perceives the activities as enjoyable, satisfying, meaningful, and convenient and can tap into the intrinsic motivation to maintain the behavior over the long-term. Encouragement from co-workers can generally be considered an external, or extrinsic, motivation until the social connections passes over to the level of enjoyment, as an intrinsic motivation.

In an article on the rationale and description of a potential intervention for obesity, Silva et al. (2008) used SDT to evaluate exercise adherence and weight control as part of a three-year randomized control trial (RCT) for an obesity treatment program.

SDT was integrated as a behavior change model within the 30 bi-weekly interventions, which focused on educating the participants about physical activity/exercise and nutrition/eating behavior. The intervention also included cognitive and behavioral aspects, such as assessing motivation, overcoming barriers, expanding knowledge, enhancing body image, and improving self-determination.

According to SDT, the participant's motives or reasons for exercising played a major role in establishing long-term adherence to physical activity. Silva et al. (2008) evaluated "the extent to which a more internal self-regulatory style, higher intrinsic motivation, and more internal perceived locus of causality (regarding exercise behavior) act as mediators of sustained exercise adherence and weight loss" (p. 2). In the follow-up article with the results of the RCT, the findings indicated that SDT-based interventions, which promote intrinsic motivation and autonomous forms of exercise regulation, enhanced behavioral regulation and facilitated exercise adherence, along with clinically significant weight loss among the 239 female participants (Silva et al., 2010). From the above research, SDT has been effective in behavior change related to increased physical activity levels among participants.

Social Ecological Model

In 1977, Urie Bronfenbrenner developed a theory on the ecology of human development from a systems perspective. This theory considers the interactive effects of the individual within the environment across multiple settings. This ecological environment is composed of nested systems, "each are contained within the next," like a bullseye (Bronfenbrenner, 1977, p. 514). The first layer is the *microsystem*, which focuses on the individual's immediate setting, such as home, workplace, school, etc. In

this setting, the individual engages in activities for specific roles within a specific physical environment. The *mesosystem* is a “system of microsystems” (Bronfenbrenner, 1977, p. 515). This aspect arises from the interconnection among the settings of the microsystem in which an individual engages at a certain point in his/her lifetime, such as the interplay between family, school, and the peer group.

The *exosystem* extends the mesosystem in the realm of formal and informal social structures. This aspect encompasses major societal institutions, encompassing the individual’s immediate settings. These structures, including the neighborhood, workplace, government, and informal social networks, among others, tend to operate on a concrete, local level. The *macrosystem* is attributed with the “overarching institutional patterns of the culture or subculture, such as economic, social, educational, legal, and political systems” (Bronfenbrenner, 1977, p.515). The macrosystem puts the other systems in a larger context through ideology and information, both implicitly and explicitly. This systems perspective facilitates the discovery and “identification of the systems properties and processes that affect, and are effected by, the behavior and development of the human being” (Bronfenbrenner, 1977, p.518). Through further development, this theory became known as the Social Ecological Model (SEM).

Stokols (1992) considered the SEM in relation to health promotion. From this perspective, health promotion underscores the “role of individuals, groups, and organizations as active agents in shaping health practices and policies to optimize both individual wellness and collective well-being” (p. 6). Further, the “social-ecological perspective emphasizes the integration of person-focused and environment-focused strategies to enhance individual and collective well-being” (p. 15). Consequently,

interventions and policies should be arranged along the various nested systems from the individual to the work to the societal levels.

From the SEM perspective, comprehensive interventions should have a multi-level design that takes advantage of the interactive role of the various systems and incorporates the cumulative impact of using a multiple systems perspective. Overall, “multifaceted interventions that incorporate complementary environmental and behavioral components and span multiple settings and levels of analysis are more likely to be effective in promoting personal and public health than are those narrower in scope” (Stokols, 1992, p.18).

To demonstrate SEM in the workplace, Stokols et al. (1996) reviewed previous research, provided the limitations and challenges, and proposed new directions for WWP research from the Social Ecological framework. The worksite itself has been deemed as a complex system, “comprising multiple social and physical environmental conditions, which jointly influence physical, mental, and social well-being” (Stokols et al., 1996, p. 138). Various circumstances within the workplace and across all life domains influenced employee health. Consequently, multiple levels of analysis need to be considered when analyzing employee health and well-being within the workplace and the broader community to cultivate comprehensive health programs.

Synthesis of Research Findings

From these theories of health behavior change, the interplay of the individual and their environment impacted their motivation to participate in physical activity. The workplace has its own opportunities and challenges as a potentially supportive environment for facilitating physical activity across the leadership, supervisors, and co-

workers. However, when considering the establishment of a culture of health within an organization to support employee health, various questions bubbled to the surface. For example, who is responsible for employee health? What role does the workplace play in facilitating healthy behaviors? How can employees be motivated to participate in physical activity components of the WWP? On the other hand, how can organizations ensure that a culture of health is established and experienced by all employees?

Various researchers have identified the aspects of successful WWP and examined the role of supervisors in supporting participation in physical activity within the WWP. Other studies have focused on physical activity-based interventions. Although Bredahl et al. (2015) suggest that “the interaction between the individual and the environment seems to be a stronger predictor of compliance than individual factors alone” (p. 10), few studies have focused on the individual employee’s perceptions about WWP to determine the barriers and potential opportunities of physical activity within WWP. For those studies that focused on the individual, most of the questions centered on what the company can do, rather than what would motivate the employees to participate. These studies also tended to take place outside of the U.S. or focus solely on blue-collar workers and/or laborers. Participation in WWP was often different for white collar workers due to competing demands in the workplace and the difficulty in determining productivity.

The perception of the individual employee regarding WWP appears to be a gap in the current literature. The *participation* of the employees is crucial to ensure that the WWP is successful. Further, the employee’s perception of the WWP is an essential research topic across the spheres of public health, exercise psychology, and human

resource management. Therefore, the subsequent study sought to elucidate these perceptions along the following research question.

Research Question

What are employees' perceptions concerning how their organization facilitates their participation in physical activity within WWP to provide better outcomes for both organizations and employees?

CHAPTER 3: METHODOLOGY

Many organizations tend to focus on the wellness aspects of workplace wellness programs (WWP), rather than those related to physical activity. Prior research shows that increased levels of physical activity are correlated to decreased risk of non-communicable and chronic diseases, and the workplace is often seen as a viable option for physical activity, due to the amount of time spent at work (Bailey et al., 2018). Nevertheless, research on participation in physical activity within WWP is limited. Even fewer studies focus on the individual level analysis, which empowers employees to tell their own stories related to their personal experiences with the WWP and the aspects related to physical activity within the WWP and the workplace in general. Therefore, a lack of understanding of this phenomenon exists in the workplace and throughout the public health and human resource management literature.

According to Cooley et al. (2014), the subjective outcomes of qualitative health research may be more informative in physical activity-based studies. Consequently, an inductive, grounded theory approach is essential to elucidate the employees' decision-making process for engaging with the WWP and specifically for partaking in the physical activity aspects of the WWP. This approach also attempts to gain insight into the facilitators and barriers experienced across all levels of the organization from leaders to supervisors to employees. Consequently, this research helps to answer the research question: What are employees' perceptions concerning how their organization facilitates their participation in physical activity within WWP to provide better outcomes for both organizations and employees?

Research Approach and Design

An inductive qualitative research design lends itself well to the process of discovering employees' perceptions related to WWP and the development of a grounded theory. Such a theory, or pattern of meaning, percolates inductively from the "bottom up" through the analysis of the "patterns, categories, and themes" from the data collection (Creswell, 2013, p. 45). As similar examples of the data are grouped and categorized, subcategories of analysis are determined to illustrate specific incidents of the behavior under investigation (O'Reilly et al., 2012). Thus, the view of the participants shapes the theory through the process of constant comparison.

Throughout this process, the researcher is a key instrument within the research design, particularly when the research occurs in a natural setting (Creswell, 2013). The researcher observes the employees within their workplace, interviews the participants to collect the appropriate data, and examines documentation regarding the WWP provided by the organization. Within this research method, the researcher typically develops their own set of open-ended questions to use with the participants, rather than relying on the instrumentation or questions of other researchers.

At the same time, the researcher's prior experience and knowledge inform their interpretation and analysis of the data. The researcher also has sensitivity to the data and recognizes that the data "have pertinent meaning to the emerging theory versus data that do not" (O'Reilly et al., 2012, p. 254). The researcher, thus, plays a role within the research and "position[s] themselves" within the research design (Creswell, 2013, p. 47). Due to this reflexivity, the researcher discusses their role and the impact on the

investigation. Ultimately, the “findings are a product of data *plus* what the researcher brings to the analysis” (Corbin & Strauss, 2008, p. 33).

Participants, Recruitment, and Sampling

Prior research has demonstrated that data saturation can be reached from three to 17 participants (Cooley et al., 2014); thus, an a priori range of 15-20 participants was set for this study. From a procedural standpoint, since this study focused on employees’ perspective of participation in physical activity within WWP, participants were sought until data saturation was reached and no new information resulted from additional interviews (Fusch & Ness, 2015). Throughout the analysis of themes, constant comparison, and triangulation, the achievement of data saturation remained top of mind to ensure a thorough set of themes was developed and additional potential themes were not overlooked or dismissed.

A cross-section of participants was sought, comprising males and females between 25-70 years of age who were currently employed in organizations that offered a WWP in the greater Philadelphia region. To possess an understanding of their organization’s WWP, the participants were required to work at the current employer for six months or more. A diverse pool of participants was recruited across ethnicity, age, and job role within their respective organization. Also, a wide variety of organizational types was pursued.

To recruit for the study, a targeted recruitment message was initially sent through LinkedIn and Facebook from the researcher. Although this set of potential participants represented a sample of convenience, the researcher’s network is extensive, composed of many employees at various companies that offer WWP. Therefore, this network was

purposefully selected for the potential “identification and selection of information-rich cases related to the phenomenon of interest” (Palinkas et al., 2015, p. 533). Further, individuals in this network were selected for their knowledge about or experience with physical activity within WWP, though they were not required to participate in the program. Overall, this sampling strategy addressed the purpose of the study “*efficiently, credibly, sufficiently, and ethically*” (Suri, 2011, p. 73).

After the initial outreach, all potential participants who inquired about the study were contacted by email or text message to review the study and the inclusion/exclusion criteria. After a preliminary determination that the study criteria were met, the informed consent was sent for review and signature prior to participation in the study. Any risks, including physical, emotional, social, legal, or financial, to the participants were minimized due to the nature of qualitative research. Potential risks from the psychological aspect of the interviews were minimal, as the researcher was able to discuss any concerns with the individual during the semi-structured interview. Moreover, the Institutional Review Board at Temple University reviewed and approved all data collection-related activities prior to the commencement of research study.

After the informed consent was signed and returned, the participants were requested to complete a brief questionnaire, *Demographic, Workplace, Employee Health, and Physical Activity Questionnaire (Appendix A)*, which was administered through Qualtrics. This questionnaire combined two surveys, described below. The first was the *Demographic and Workplace Questionnaire*, composed of questions regarding the participants’ employment status, title, supervisor role, and the employing organization, specifically the type of organization and whether the organization offers a WWP. If these

two criteria were not met, the survey ended for the participant and they were not eligible to participate in the study. If these two criteria were met, the participant continued to the second questionnaire, called the *Employee Health and Physical Activity Survey*. This survey incorporated questions about the participants' health, wellness, and current physical activity levels, which were excerpted from the *CDC Employee Health Assessment (CAPTURETM; 2005)*. The data from the questionnaire was used for comparative analysis and corroboration of qualitative findings, particularly related to the health and physical activity levels of the participants.

Overall, the participants were assessed and selected based on criterion sampling, which involved “reviewing and studying ‘all cases that meet some predetermined criterion of importance’” (Patton, 2002, p. 238, as cited in Suri, 2011, p. 69). Under this method of sampling, the participants were assumed to be knowledgeable about the phenomenon of interest, while also providing information that was “both detailed (depth) and generalizable (breadth)” (Palinkas et al., 2015, p. 539). Further, the informants were “selected on the basis of their apparent knowledge of and experience with the constructs and processes of interest” (Murphy et al., 2017, p. 298).

Per the criteria, participants were required to work at an organization that offered a WWP for at least six months. However, they were not required to participate in the program, in physical activity within the program, or physical activity in general. Participation was not required to enable the researcher to probe the employee's decision-making process for selecting whether or not to participate in physical activity within the WWP and capture more information on diverse experiences with the programs and physical activity participation. The overarching goal of the study was to identify tactics

that companies can potentially employ to facilitate more participation in the WWP, especially the physical activity aspects. At the same time, the inclusion of non-participants combated a potential challenge of criterion sampling by failing “to capture the experiences or activities of other groups playing other roles in the process” (Palinkas et al., 2015, p. 539).

In addition to their participation in the study, the participants were also requested to recommend other informants who potentially met the criterion through snowball sampling. Further, the snowball sampling was utilized “to identify cases of interest from sampling people who know people that generally have similar characteristics who, in turn know people, also with similar characteristics” (Palinkas et al., 2015, p. 535). Snowball sampling enabled the recruitment of additional participants who were previously been unreachable by the researcher.

Data Collection: Semi-Structured Interviews

Primary data collection was in the form of semi-structured interviews with employees, conducted in accordance with the process set forth by Corbin and Strauss (2008). The interviews were scheduled for 30-45 minutes. The Semi-Structured Interview Guide (*Appendix B*) was initially shaped by the literature review and prior research on the Social Ecological Model’s interactive effects of the individual and their environment and on the Self-Determination Theory’s lens of motivation. Then, the researcher reassessed the questions to concentrate on the experiences of the participants with physical activity within the WWP from multiple aspects. A portion of the interview questions were based on the research of Zweber et al. (2015a) in the development and validation of the Multi-faceted Organizational Health Climate Assessment (MOHCA). The MOHCA is a nine-

item scale, separately assessing the health climate from the workgroup, supervisor, and organizational levels. Overall, from the grounded theory framework, questions asked of the participants focused “on understanding how individuals experience the process and identify the steps in the process” (Creswell, 2013, p. 88).

Initially in the interview, a general question about the current physical activity was asked; this opening aided the researcher in developing trust and rapport with the participants. Then, the participants were asked to describe their understanding of their organization’s workplace wellness program, their participation in the program, and their decision-making process for selecting whether or not to participate in the WWP. Then, the researcher asked about their ability or willingness to exercise within the confines of their workday, their organization’s view of health and wellness, and the role of their supervisor and colleagues in their participation. To gain access to items that would promote their participation, a question on what would facilitate their participation and what was missing from the program was also asked. These questions provided input for developing the grounded theory for elevating employee participation within the WWP.

At the beginning of data collection, the semi-structured interviews were more structured to ensure consistent questioning. As the researcher started to analyze the interviews and themes started to emerge, if the participant mentioned one of the themes, additional questions were asked to further assess them and start fact-checking against the experiences of the previous participants. This fact-checking became particularly pertinent around the role of the supervisor when the participant was a supervisor themselves.

Moreover, this study took place nearly one year into the COVID-19 pandemic within the United States. Although some of the participants mentioned their experience

throughout the interview, a question specifically on the impact of COVID was included near the end of the interview. A summary of their experiences related to COVID is provided in the Implications for Practice section.

Initially, the researcher planned to conduct the interviews in person, with a focus on conducting them in the participants' work setting to provide some familiarity and a naturalistic context. Although the option for a virtual meeting was originally available, the researcher anticipated conducting most of the interviews in person. However, starting shortly after the study was approved in February 2020, the COVID-19 pandemic diverted all the interviews to the virtual setting. Thus, the video software Zoom was used to conduct the interviews; all but two of the interviews were conducted with both audio and video. Although the natural setting is typically preferred in qualitative research (Creswell, 2013), the goal was to make the interviews convenient for the employees to facilitate participation in the study. Consequently, the virtual setting was necessary to maintain the health and safety of the participants and the researcher.

The virtual setting supported the development of rapport with the participants, though observance of body language was slightly hindered. A few of the participants were somewhat reserved in their answers and provided only minimal information. For these interviews, the researcher added a few questions to the semi-structured interview guide to spotlight their perceptions of the WWP and attempt to gather more rich information. Zoom fatigue and the virtual setting may have influenced the fluidity of experience with some of the participants.

The interviews were recorded with permission of each participant using the recording feature in Zoom. The audio files were then transcribed by Zoom or the online

service of Scribie Audio/Video Transcription. The transcriptions were analyzed and cross-examined, then notations and coding were made through Excel, which can be used as a qualitative analysis tool (Meyer & Avery, 2009). Consequently, the data was constantly reviewed as it was gathered so that the emergent themes could be assessed and checked against the previous data throughout the data collection process.

This iterative process enabled the researcher to determine the point of data saturation when new data no longer needed to be collected and further recruitment could be halted. Data or category saturation signified a completeness of the data and occurred when “subsequent data incidents that are examined provide no new information, either in terms of refining the category or of its properties, or of its relationship to other categories” (Locke, 2001, p. 53, as cited in O’Reilly et al., 2012, p. 253-254). According to Fusch and Ness (2015), saturation provided enough information for replication in similar studies, ensured that the themes are robust and adequately defined, and indicated when no further coding is feasible.

Data Collection: Review of WWP Documentation

In addition to the interview transcripts, the researcher also sought additional data, such as personal observations and employers’ documentation on their WWP, to provide corroborating evidence to support the themes and the emergent theory. Specifically, for organizations in which the participants are employed, the researcher collected and reviewed the publicly available information, such as websites, on the organization’s WWP and the role of physical activity in it. This process, known as triangulation, enabled the researcher to validate their findings (Creswell, 2013). By triangulating the

information, the themes were checked against various sources of data to ensure consistency and the overall validity of the research outcomes.

Data Analysis

The overall analysis process was iterative such that the data and potential themes were constantly compared and checked against newly acquired data, until a comprehensive set of themes was established. These themes were then used to generate the theory or an explanation for the action or process (Creswell, 2013). Thus, the data collection and analysis were emergent, shifting and changing as the researcher collected further data and assessed the surfacing themes. This led to minor changes in the interview questions for participants who were interviewed later in the process so that the questions were better suited for data collection. This process focused on the action and interaction of experience, which then impacted the consequences and contingencies related to this interaction (Corbin & Strauss, 2008). The various perspectives on events and experiences were used as the lenses to develop and analyze the emergent themes.

This process was layered with three rounds of coding, including open coding, axial coding, and selective coding, to build the budding theory (Turner, 2014). Coding raised the raw data to a conceptual level (Corbin & Strauss, 2008). The transcribed interviews were first subject to open coding to reveal initial themes and informational categories. Open coding served to break apart data and outlined concepts that represent blocks of raw data. Through rounds of open coding, the themes were then organized into categories. Through constant comparison, the themes are continually checked against new data, such as additional sources of information from the companies and ongoing

literature review, “to look for emerging patterns and themes” (Goulding, 2001, as cited in Turner, 2014, p. 35).

When a strong category started to emerge through the open coding, this became the foci or “core” phenomenon around which the other categories were arranged (Creswell, 2013, p. 86). Then, axial coding, or “crosscutting,” was used to group the related themes and concepts around this core phenomenon (Corbin & Strauss, 2008, p. 195). Subsequently, selective coding identified the core categories that “best represent[ed] the whole data” (Turner, 2014, p. 35). Overall, the interrelationship between the core phenomenon and the other categories started to illustrate the visual model of the thematic matrix.

Once the matrix started to develop from the axial coding, theoretical comparisons were used to evaluate the properties of the themes and develop a hypothesis of the interrelation between the categories (Corbin & Strauss, 2008). Consequently, this theoretical framework enabled the development of an emergent theory, which was ultimately derived from the data and the resulting categories. Through the three levels of coding, the action and interaction of these themes and categories were assessed and various types of conditions and consequences surfaced from the analysis. These interactions, conditions, and consequences were then used to build the theory (Corbin & Strauss, 2008). After the analysis, the “findings should be presented as a set of interrelated concepts” with an “overall unifying explanatory scheme that raises the findings to the level of theory” (Corbin & Strauss, 2008, p.104). Further, the outcomes of this process were regularly discussed with the dissertation chair to facilitate clarity and appropriate representation.

Acknowledging the role that the researcher plays in the process, the researcher actively wrote memos and reflections on new ideas throughout the data collection process (Corbin & Strauss, 2008). This allowed the researcher to describe how prior experiences influenced the analysis and subsequent analysis of the data. Under a qualitative research design, the researcher is positioned within the research design, so the process of memo writing helped to illustrate this influence on the outcome (Creswell, 2013).

The experiences of the participants were also cross-checked against relevant results from prior research. Data from active WWP was also used to corroborate the experiences of the participants and ensure the descriptions of the program aspects provided. This multi-tiered process was used to triangulate the data and ensure validity of the qualitative research design and analysis.

Summary

Due to its inductive nature, grounded theory provided the appropriate framework for developing a theory related to the employees' individual perceptions of their motivation for their participation in physical activity-related aspects of a workplace wellness program. By focusing on the individual, rather than the organization itself, this study sought to elucidate ways to understand the employee's perspective on the WWP and potentially identify ways in which participation can be started, maintained, or increased, depending on the participation level of the employee. Through the findings, detailed in Chapter 4, the data were used to develop a theory to enhance participation in physical activity in the WWP and, ultimately, improve employee health and overall well-being, while potentially increasing the bottom line of the organizations.

CHAPTER 4: PRESENTATION OF THE DATA

Within this Chapter, the relevant data culled from the interviews is presented, along with the relevant data collected to inform the research study. The investigation focused on the research question: What are employees' perceptions concerning how their organization facilitates their participation in physical activity within workplace wellness programs (WWP) to provide better outcomes for both organizations and employees? To answer this question, a description of the sample, the analysis of emergent themes, and the presentation of the data are provided. From the qualitative research methodology, the depicted themes emerged from thorough data collection, triangulation, constant comparison, and the reflective process of the researcher. Overall, the participants' rich experiences influenced their decision-making process for whether or not to participate in physical activity in their organization's WWP and informed the subsequent themes, relationships, and resulting grounded theory.

Description and Demographics of the Sample

Through purposeful sampling within the greater Philadelphia region, 21 potential participants were recruited. Of these, 19 (11 female; 8 male) completed the survey, met the inclusion criteria, and were interviewed. *Table 1* describes the sample. The sample was generally diverse, except for ethnicity. The ages ranged from 25 to 70, and the ethnicities were 16 Caucasian, 2 Black/African American, and 1 Asian. All participants attended some college, with nearly half holding higher degrees, including six master's, one professional, and one doctorate. The participants came from a variety of industries, such as business/financial operations and services, education, health services/ pharmaceutical, military-related, production, and sales. Seven held supervisory roles.

Table 1*Sample Characteristics*

No.	Gender	Age Range	Ethnicity	Level of Supervisory Responsibility	Type of Organization
1	Male	35-44	Caucasian	Executive	Sales
2	Female	25-34	Caucasian	None	Healthcare/Health Services
3	Male	35-44	African American	None	Military-Related
4	Female	35-44	African American	Team Leader	Business and Financial Operations
5	Female	25-34	Caucasian	None	Education
6	Female	35-44	Asian	Supervisor	Healthcare/Health Services
7	Male	35-44	Caucasian	None	Pharmaceutical
8	Male	45-54	Caucasian	Team Leader	Production
9	Female	45-54	Caucasian	None	Education
10	Male	35-44	Caucasian	Team Leader	Military-Related
11	Male	45-54	Caucasian	Manager	Financial Services
12	Female	35-44	Caucasian	Manager	Education
13	Female	45-54	Caucasian	Manager	Education
14	Female	45-54	Caucasian	None	Pharmaceutical
15	Female	45-54	Caucasian	Team Leader	Business and Financial Operations
16	Female	65-70	Caucasian	Team Leader	Education
17	Male	45-54	Caucasian	Manager	Business and Financial Operations
18	Female	35-44	Caucasian	Manager	Business and Financial Operations
19	Male	35-44	Caucasian	None	Business and Financial Operations

In the survey, which took approximately nine (9) minutes to complete, participants self-reported on their demographics, positions, employer, health, and physical activity levels. Nearly 90% of participants indicated their general health as good, very good, or excellent. Upon assessment of their physical activity, only 52% of participants met the weekly guidelines of minutes and intensity based on the guidelines by the Department of Health and Human Services (HHS). When assessing the participants ability to perform physical activity within their workplace, only six participants reported yes and six participants reported sometimes; consequently, 37% of the participants never or rarely had the opportunity. In an ideal situation, short bouts of less than 10 minutes (N=6) and 31-40 minutes (N=5) of physical activity in the workplace had the highest responses from the sample.

During the interviews, which averaged 23 minutes each, participants reported a wide range of normal physical activity pursuits, both in the workplace and on their own. At workplaces without gym facilities, most activities were limited to walking and running. If the employer had an onsite gym, prior to COVID, participants weight lifted, used the cardio machines, like treadmills and stationary bikes, or took part in group classes. During COVID, many of the onsite gyms closed, though some were starting to open again with limited or pre-scheduled usages at the time of the interviews. Outside of the workplace, in addition to walking and going to the gym, the participants hiked, biked, kayaked, golfed, and played pickleball. They also did CrossFit, yoga, Zumba, and instructional videos at home, among other activities.

Emergence of Themes from Analysis

The analysis occurred in several stages. After the first six interviews, the researcher journaled on the general impressions that were discernible from the data. Four overarching themes started to surface, with the moderator of motivation. As the researcher continued to interview additional participants, a dichotomy of facilitators and barriers began to arise, depending on the experience of the participant. Similar to the Social Ecological Model, the researcher also started to see an interplay between the personal experience, the social spheres among the manager and colleagues, and the external activities and program aspects at the organizational level.

When the researcher began coding the individual interviews, these dichotomies became more apparent. In addition to the axial codes, the researcher subdivided the topics by these dichotomies. After several interviews were coded in this manner, the frequency of the data was graphed to observe noticeable patterns in the codes. As a novice, the researcher discovered that dividing and subdividing the data in the above manner neglected the richness and depth of the lived experiences and the true value of using qualitative inquiry to develop a theory grounded in the informants' perspectives.

According to McPherson and Sauder (2016), qualitative data can be quantified such that “counts” can be used in the data analysis and presentation of the data. However, “insights do not come from the additive effects of quantities” but from the synthesis and contextualization of the activities (McPherson & Sauder 2016, p. 436). Although a hierarchy graph of the frequencies of the themes by the participants is provided in the Results of the Thematic Analysis section, the frequencies were not employed to define

the themes and relationships. Rather, the quantified data was employed to triangulate the data and safeguard against researcher bias (McPherson & Sauder 2016).

Since the initial question on general levels of physical activity was used to build rapport, those responses were extracted from the quoted material and reviewed separately to provide the scope of physical activity types performed. A summary of the types of physical activity was included in the Description of the Sample section. Given the current state of the COVID-19 pandemic and its impact on employees, a question specifically related to the impact of COVID was asked. Additionally, many of the participants related their experience with COVID throughout the interview; this feedback was incorporated into the Implications for Practice section in Chapter 5.

After this round of analysis, the researcher took another step back to observe the general impressions that were coming alive from the data and found that the initial-observed themes were repeating themselves. At this point, the researcher thought a few new themes were manifesting. However, upon further investigation, the “new” themes represented aspects of the existing themes. Since no new themes appeared, the researcher felt that the point of saturation was reached and recruiting additional participants ended. After all the interviews were completed, the researcher conducted an additional review and recoding of the data for consistency.

Through this iterative exchange, the researcher started to understand the decision-making process for the individual employees regarding whether or not to participate in the WWP, along with their views on physical activity within the WWP or at the workplace in general. The resulting dichotomy of experiences elucidated the participants’ personal decision regarding participation. These facilitators and barriers shaped how the

organizations can effectively promote and facilitate physical activity participation within the WWP. This dichotomy was used to establish the final categories of personal decision-making process vs. the company's role in facilitation. In addition, another aspect, called "bolsters," surfaced in the middle of this dichotomy. These bolsters were defined as people or aspects that indirectly supported or reinforced their participation.

From these categories, selective coding was used to delineate the participants' experiences with the themes. These codes correlated more to the emotional or psychological aspect connected to the personal decision-making process, including facilitator, barrier, neutral, and need. These codes were used to structure the action items needed by the companies to increase participation in the WWP and, ultimately, develop the grounded theory, though they were not included in the Results section.

Throughout the process, the researcher periodically read articles related to the emerging themes and used program information from Johnson & Johnson and Virgin Pulse to corroborate the experiences described by the participants. This corroboration specifically focused on the details of the WWP, the incentives, and the culture of health within the participants' organizations. As the interviews progressed, the researcher also started to fact-check the themes through additional questions to the subsequent participants. These various forms of data checking allowed the triangulation of the themes against various sources. Thus, throughout the coding and triangulation process, the researcher ensured a systematic process of analysis and constant comparison. This reflexive process used the perspectives of different participants to reduce "the effects of any preconceptions or biases" (Alvesson, 2011, as cited in Turner, 2014, p. 34). Finally, since the interviews provided qualitatively rich findings, the coding of the data offered

the ability to assess frequencies of the participants' experiences within the themes and categories. The resulting themes were not determined solely on these frequencies, rather they provided a frame of reference and reflected the shared or disparate experiences of the participants with the WWP in their organization. The descriptions of the categories, selective codes, and themes are presented subsequently.

Results of the Thematic Analysis

The data from the interviews, WWP source data, the literature, and the researcher's experiences shaped the development of the themes, facets, and levels that subsequently described. In addition to the themes, a short summary of the participants' understanding of their employer's workplace wellness program is presented.

From their perspective, the participants described similar aspects among the WWP offered by their employers. Most of the programs are managed by the organizations' insurance company. Within the WWP, most participants initially completed a preventative biometric screening, along with a physical examination. Then, they completed certain activities or programs to collect points towards incentives, which typically took the form of a monetary incentive, a discount on the insurance premiums, or a contribution to the Health Savings Account. These programs often included individual or group challenges and competitions, which provided a timely focus for their activities – at least for short periods of time. A few programs also provided health coaching for goal setting related to health and wellness. Nearly half of the participants had a gym on-site at their employer. This proximity typically facilitated usage, particularly if the gym provided showers and locker rooms. Several participants also received a reimbursement for joining a gym if the organization did not have one on-site.

Although generally familiar with the features of the WWP, not all the interviewees participated in the program offered by their organization. As a result, these participants did not engage in physical activity within the program. The experiences of these interviewees were valuable in gaining an outsider perspective and deciphering methods in which their organization could better facilitate or encourage their joining the program and potentially perform physical activity within it. Consequently, the personal decision for selecting whether or not to participate in physical activity provided the most content rich data from the informants of the study. The variety of their decision-making processes provided the primary basis for the themes in the grounded theory development.

Through the analysis of the semi-structured interviews, the responses of the participants illustrated a vivid picture about how their organization influenced their decision whether or not to participate in physical activity within the WWP and in the workplace in general. Three levels of decision-making emerged: individual, relational, and organizational. Further, three specific facets, including barriers, bolsters, and facilitators, appeared within each of these levels that shaped the experiences of the participants and their decision-making process. The barriers related to items that prevented the informant from participating in physical activity or the WWP. The bolsters were people or aspects that indirectly supported or reinforced their participation, while the facilitators were the items that triggered or precipitated their participation. The most relevant themes, which were consistently represented in the data, are described below within the context of these levels and facets and presented in *Table 2*.

Table 2*Thematic Findings from the Participants Regarding their Decision-Making Process for Participation in Physical Activity in the WWP and/or the Workplace*

Theme	Definition	Example from Data
<i>Individual Aspects</i>		
Time Management	The process of organizing one's time effectively or productively, especially at work.	"I have not been overly successful at working out during the workday per se; I think that has more to do with my personal scheduling than my limitations." (Participant 11)
Advantageousness	The quality of being encouraging or promising a successful outcome, particularly by receiving a benefit for already participating in physical activity.	"Which is really kind of like, I work out any way so it's just a bonus for me." (Participant 9)
Need for Movement	The desire to change position or maintain regular activity, particularly for the health benefits.	"And now that I have a sedentary job, I feel like my mental health would go way down if I didn't have some level of activity." (Participant 14)
<i>Relational Aspects</i>		
Supervisor Ambivalence	A state of simultaneous and contradictory support and/or indifference from the supervisor related to physical activity in the workplace.	"I don't think there's a big role in terms of it. My manager is awesome, and she definitely encourages work-life balance and doing what we need to do, but I don't know if there's specific discussions on the Wellness Program." (Participant 6)
Social / "Gregarious" Connections	The quality of being sociable or fond of company, particularly related to participating in physical activity with others or groups of co-workers.	"I think it's amazing because my motivation is gregarious, and I know a lot of people's motivation is very solo, they don't need people to go to the gym, some don't want people to go to the gym, but for me, because I'm gregarious, and I like to know that other people are doing the same thing as me, even if they're not doing it at the same time as me." (Participant 3)

Table 2 (continued)

Theme	Definition	Example from Data
Messages from Leadership	A set of ideas, ideals, or encouragements provided by those in leadership through various modes of communication.	“Best to come from the top, so you get the support if you want to do it.” (Participant 10)
<i>Organizational Aspects</i>		
Culture of Health	“A workplace that places value on and is conducive to employee health and well-being” (Kent et al., 2016, p.117)	“They clearly want people to be healthy mentally and physically and put out opportunities for people to make healthy choices in both the food that they offer in the cafeteria and then the opportunities to have a gym on site.” (Participant 7)
Incentives and Reimbursements	A thing that motivates or drives one to behave in a certain way; within the WWP, this could be in the form of monetary, insurance discounts, funds in the Health Savings Account, and/or gym reimbursement/discounts.	“You can earn points rewards and a discount on your next year’s insurance a discount rate of \$25 per pay period, if you perform certain activities within the wellness program.” (Participant 12) “There is one other program they offer that will reimburse you up to \$200 a year, I believe, for gym membership or workout equipment, which is actually pretty nice.” (Participant 2)
Limited Awareness	A state of having restricted knowledge or perception of the WWP, its features, and how to participate.	“My office has not been very good in giving a lot of materials, whether it be about workplace wellness or even just health insurance in general. They kind of just say here’s a plan, and you can figure it out.” (Participant 5)

The themes that surfaced are arranged to convey the facets by which each contributes as a barrier, bolster, or facilitator of employee participation in physical activity within the WWP. At the individual level, the three themes emerged: time management, advantageousness, and need for movement. At the relational level, the themes were: supervisor ambivalence, social / “gregarious” connection, and messages from leadership. At the organizational level, limited awareness, culture of health, and incentives and reimbursements appeared as the influencing themes.

Communication issues also arose heavily within the interviews, particularly related to limited awareness and the lack of pertinent information given to the employees about the WWP. Consequently, communication, along with other input from the participants, are described in the Implications for Practice section related to how the employers can facilitate their employees to partake in the WWP and physical activity in the workplace in general.

When analyzing the themes, the quotes were bundled and quantified to determine the relative influence on the participants’ decision-making processes. Prior research has shown, qualitative data can be quantified; however, “insights do not come from the additive effects of quantities” (McPherson & Sauder 2016, p. 436). Thus, the frequencies are presented to provide context to the synthesized data, rather than define the emergent themes and relationships. *Figure 1* illustrates the hierarchy of themes within the personal decision-making process for participation in physical activity in the WWP and/or the workplace.

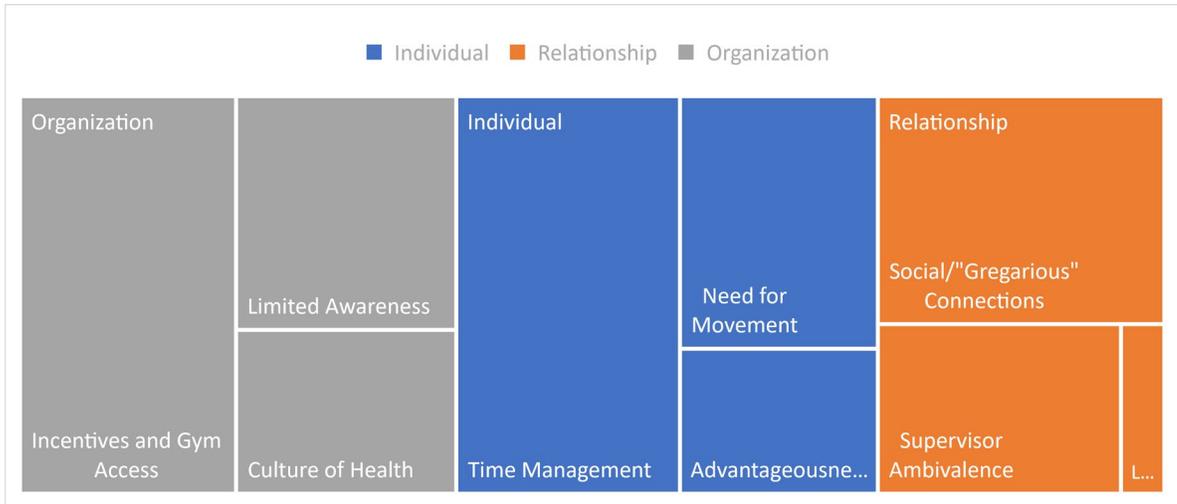


Figure 1. Hierarchy of Themes from Participants' Decision-Making Process.

Time Management (Individual Barrier)

Although prior researchers have often indicated the workplace as a viable location to facilitate physical activity and minimize sedentary behaviors, most participants conveyed inadequate opportunities to do so, particularly due to time management and scheduling constraints. A few participants specifically mentioned that they did not feel comfortable performing physical activity within the confines of their workday. From the survey, 37% of the participants never or rarely had the opportunity. For example:

I have not been overly successful at working out during the workday per se; I think that has more to do with my personal scheduling than my limitations.
(Participant 11)

Among these participants, their personal decisions around their scheduling options and time management appeared as a barrier. They felt that they did not have control of their own schedules. Participant 7 stated:

Oftentimes, people will see that your lunch break is free, and they'll send you an invite for a meeting because that's the only time you have available.

Although Participant 3 did not personally take advantage, flextime is offered by his organization. He described others' use of flextime in the following manner:

And there's actually...We have what's called flextime, which means that we can...As long as we get in our weekly hours, we can do it in any way we want. For example, you can start your day anytime between about 6:00 AM and 9:30. So, what our schedule also allows us to do is to sign out during the day, and then sign back in again. So, there are some people that will sign out, go to the gym, workout for longer than their regular lunch break a lot of time, and then come back to the office and sign back in again. So, there are people who do that, that work that schedule.

For flextime to be effective for time management, employees need to feel comfortable to use it, particularly when considering other competing work and personal demands on their time.

For those who work in a professional setting, time management related to maintaining their appearance was especially concerning and difficult to navigate. Several participants mentioned that they did not have enough time within their day to go to the gym, change, workout, clean up, change back to their work clothes, and return to work within the time frame of their lunch break. This was evident both in the office physically or in the current virtual/work from home environment. Consequently, one informant questioned the likelihood and/or usefulness of performing physical activity within her workday. Furthermore:

And then, if you know, then there's sort of the logistics about it, of like, if you're sweating, do you want to then come on video five minutes later when you're sort of beet red and like jump right into something else. If you don't do that, like, do you shower and then go to work and then how much time are you stepping away from the day? (Participant 15)

When discussing how their organization could facilitate her participation in physical activity, one participant questioned the appropriateness of performing physical

activity in the workplace. Admittedly, she did not participate in the WWP and typically walks on her own outside of work. As a supervisor, when asked if she supports physical activity among her staff, she stated:

I don't know that it's necessarily this organization itself or is it, I think it's just kind of [the] culture and American culture. It is a very 9:00 to 5:00 kind of culture... And if that's what I'm thinking, like it's more of a "on your personal time" kind of culture in the United States. (Participant 13)

Time management for physical activity took several forms for the participants, based on the person, their position, and their workplace environment. Although some of the participants were able to adjust their schedule to exercise at work, the overwhelming responses were negative. Specifically, a lack of flextime and personal scheduling options were cited as personal barriers to physical activity within the confines of the workday. To enhance time management. Participant 5 suggested one remedy was to have "built-in time" that was authorized and/or scheduled by their organization.

Advantageousness (Individual Bolster)

Among those who participated in physical activity within the WWP, several took advantage of receiving the WWP's incentives for activities that they were already doing. Advantageousness was used to describe this theme as the quality of being encouraging or promising a successful outcome, particularly by receiving a benefit for already performing physical activity. These participants also tended to see the inherent health benefits of physical activity, which was typically their underlying motivation for participating in the WWP. Consequently, the monetary incentives and insurance discounts were positive byproducts for tracking their activities. For example:

I participate in the programs anytime they have one of those cashback things. I will always check the boxes to make sure I get the money. (Participant 10)

Which is really kind of like, I work out any way so it's just a bonus for me. That I'll probably just spend on gym clothes... They were going to pay me. So okay, yes, I will take your money, and I will do, you know, what I need to do to track the visits and whatnot. (Participant 9)

However, for other participants, the incentives admittedly did not change their behavior; they were merely taking advantage of the incentives offered. In fact, they commented on performing the least amount of activity possible to achieve the goals set forth to receive the program's incentive. Further, since the accountability for the tracking is limited, a few of the participants mentioned "gaming the system" or doing the bare minimum of activity to achieve the points necessary for the incentives.

I would do the rally thing, but I didn't change my habits. It was simply recording what I was already doing for the \$200 and honestly, it was really, the APP is really annoying and I almost don't do it because it's just a hassle. (Participant 7)

I'm not always a fan of the things they asked us to do...but you know, I think sometimes it's easy to game the system, you know, they're not looking for proof, so I can just lie and get my points but that's not really the point. (Participant 17)

Within this theme, an additional sub-code of coercion/punitive appeared among a subset of the participants, all of whom work for the same organization. Although the program is positioned as voluntary, these informants felt that they would be penalized if they did not participate due to the withdrawal of a significant insurance subsidization.

According to Participant 11:

While you're always given the choice not to participate, because it's not a mandatory, it does feel more like you're being coerced into it, so you go with that or we're just gonna charge an extra thousand dollars a month.

This group felt the program was intrusive and inconvenient since the Virgin Pulse APP required them to regularly enter detailed information about their activities. These

participants also questioned the privacy of their personal information within this system, which was managed by an external vendor.

Generally, participants displayed advantageousness by achieving points and collecting the incentives for activities that they were already performing outside of the WWP. Although a few participants gamed the system and others felt coerced to participate, the resulting engagement with the WWP was achieved on behalf of the organization. Therefore, advantageousness bolstered their decision-making process.

Need for Movement (Individual Facilitator)

Most of the participants discussed their need for movement through their desire to change position or maintain regular activity throughout the day while at work. Since most worked in white collar positions, they noted the high levels of sedentariness during their workday. A few also mentioned the need for regular movement for the health benefits or to combat injuries and body pain. For example:

And you know, if I wanted to get up and stretch my legs for 10 minutes during the day and just take a quick lap around the building or whatever, that's never a problem. (Participant 9)

Another participant purchased a headset so that she could remain active and walk around the office whilst working. Furthermore:

I do, I walk around, um, I have a headset that I purchased myself, so that when I'm on the phone, I am walking; I [am] moving. (Participant 18)

For those who participated in walking challenges within the WWP, walking and regular movement at work was particularly important. According to Participant 19:

We have the space within the building to accumulate steps throughout the day and there were definitely people that did that sort of regularly, including myself, because, you know, when you get your steps, you know, and you also get a little bit of time away from the desk so it was encouraged.

Overall, the need for movement appeared across nearly all the interviews. Even short bouts of movement to walk or stretch was noted as important to combat sedentariness and remain active during the workday. Further, the positive impact on their mental health and the achievement of their WWP goals were also described.

Supervisor Ambivalence (Relational Barrier)

At the relational level, supervisor ambivalence was a barrier described as a state of simultaneous and contradictory support and/or indifference from the supervisor related to physical activity in the workplace. All the participants felt that their supervisors were somewhat indifferent about supporting, or even mentioning, physical activity in the WWP and in the workplace generally. The overwhelming responses were “no” or “none” in regard to the role of their supervisor in their participation. Participant 3 summarized:

I think he has neither encouraged or discouraged my participation in any wellness program.

The participants also stated that their supervisors never mentioned or promoted the wellness program at their organization. For instance:

I don't think there's a big role in terms of it. My manager is awesome and she definitely encourages work-life balance and doing what we need to do, but I don't know if there's specific discussions on the wellness program. (Participant 6)

One participant described this indifference as “reactive encouragement.” His supervisor did not necessarily demonstrate support of physical activity in the workplace. However, if a message from the top of the organization encouraged participation in an upcoming athletic challenge within the workplace, she would endorse it. Further:

Like, if we have an hour to go play football or something, she does encourage us to do that if we have time away from work, you know, no meetings or something. I would say more reactive encouragement than proactive...Well, more after

already something is planned by the command so she would never be part of the planning or anything but once if I told her, I was interested in something, she would absolutely encourage it so. (Participant 10)

As the role of supervisor support was considered, a few participants noted that although their supervisor did not vocalize their support of physical activity, the supervisors were themselves physically active outside of the workplace and modeled healthy behaviors. Participant 14 noted:

And she definitely doesn't work out during the day; she's a bit younger than I am, and I think she is a runner, and she probably runs first thing in the morning, sometimes they see her and her running that's so that's good. I know she's not working out during the day.

Alternatively, when looking at supervisory ambivalence as a barrier, one participant recently had an enlightening exchange with her supervisor. In the conversation, the supervisor talked about her own physical activity during the workday. The participant felt that this discussion "gave her permission" to hold off on completing certain tasks so that she could work out during the workday as well. Further:

I'm based on a comment, which I was thinking of doing anyway, but then you know, sort of, you hear your boss or your manager say something like I'm going to go work out now and then I'm going to do this thing that I just, we just talked about. I'm going to do it after that was like, you know, what I need to start working out during the day, rather than try and fit it in sort of with dinner, leaving the house and whatever else...but I'm going to start doing that. I don't know if that counts because I've not done it yet. But I'm going to start doing that and I, you know, as I said. Once you give yourself permission and once your manager is aware, like it's time you know I'll do it. (Participant 15)

Although a few supervisors demonstrated the reactive encouragement or modeled regular physical activity, supervisor ambivalence was a resounding relational-based barrier for all participants. Many of the participants did not feel supported by their supervisor to participate in physical activity at work. They also noted that their

supervisors never mentioned the WWP, let alone encouraged them to participate in it, regardless of the benefits for the individual employee or the organization as a whole. Along these lines, Participant 12 suggested that the organization should be “encouraging managers to encourage staff to participate.”

Social / “Gregarious” Connections (Relational Bolster)

Throughout the interviews, the positivity and encouragement from social connections in physical activity pursuits within the workplace were apparent from all participants. “Gregarious” motivation appeared as an “in vivo” code. According to Charmaz (2006), “such codes can not only add a slice of reality to the coding process, but they also help the research stay close to the phenomenon” (as cited in Murphy et al., 2017, p. 300). Within this context, social / “gregarious” connections related to the quality of being sociable or fond of company, particularly related to participating in physical activity with others or groups of co-workers. Specifically:

I think it’s amazing because my motivation is gregarious, and I know a lot of people’s motivation is very solo, they don’t need people to go to the gym, some don’t want people to go to the gym, but for me, because I’m gregarious, and I like to know that other people are doing the same thing as me, even if they’re not doing it at the same time as me. (Participant 3)

A few participants went on to describe the camaraderie from participating in the challenges within the WWP. For instance:

It does try to foster camaraderie. Getting everybody in the company or everybody in the audience participating to participate in these group goals and these group challenges. (Participant 11)

I still do get more encouragement from my co-workers to go over to the gym than any supervisor or anything. But that tends to be more social and not like, “Oh hey, I feel healthier going to the gym,” it’s not that, it’s more like, “Hey, if you wanna go workout you can go and talk and lift some weights or shoot the ball around,”

or whatever. But yeah, I would say my co-workers, my colleagues are more influential than any form of management that we have. (Participant 3)

These social connections also fostered accountability for regularly participating in physical activity.

You end up having, you know, kind of like a core group of the morning people. And so, you know, if you see, if you see somebody missing...like oh you're right, I haven't seen you for so long here, it's so good to see you back. (Participant 16)

The group challenges also nurtured excitement and competition among colleagues.

I think, in the past to like some of those challenges, there's team challenges. It definitely drives you because you get to see everyone else's activity level. There's a bit of competition. It's all about the like the culture, you create too so I've been a team captain a couple times and I've sent routine emails making them fun and trying to encourage people to take the steps at lunch, don't take the elevator, or you know, walk around the house while you're brushing your teeth, so I think we've definitely helped each other at work. (Participant 6)

Although the group and social aspects may not have influenced the employees' decision to participate in the WWP, this sense of camaraderie and "gregarious" motivation bolstered their activities within it. For those who enjoyed competition, the group challenges also enhanced their intrinsic experiences of fun and enjoyment, which further fostered their continued performance of physical activity. The social connections also contributed to the individual's accountability for maintaining a healthy lifestyle.

Messages from Leadership (Relational Facilitator)

While colleagues positively bolstered individual activity levels, general participation in the WWP and physical activity within it were further aided by verbal messages from the organization's leadership, such as the CEO, Captain, and other top officials. These messages were described as a set of ideas, ideals, or encouragements provided by those in leadership through various modes of communication. Even though

only a quarter of the participants mentioned receiving verbal messages from the leadership, especially at organization-wide meetings, the sentiment was very impactful in their decision to perform physical activity at the workplace and reinforced the many emails sent from HR. Specifically, Participant 10 explained this within his workplace:

So, when they do a work-sponsored one, it's through email. And, we have you know, a monthly meeting, where everyone in the command has to get together so they also announce it verbally from the top person...Best to come from the top, so you get the support if you want to do it.

Another participant mentioned how messages from the leadership positively influenced employees' physical activity:

And so, yes, and our CEO spoke of going to one [virtual class], which then also gives you permission to sort of, you know, spend some amount of time there. (Participant 15)

Although few participants received verbal affirmation from their organization's leadership, those who experienced it were positively impacted, through increased motivation to participate in physical activity, especially company-sponsored competitions or classes. This impact established messages from leadership as a relational facilitator. These messages helped to elevate the emails from HR or the insurance company to an actionable directive from the top and gave employees' permission to partake in the WWP-related physical activity.

Limited Awareness (Organizational Barrier)

Acknowledging the decision to partake in the WWP is a personal decision, the organization has a responsibility to explain and promote the WWP to its employees effectively and repeatedly. A majority of participants felt their organization did not provide them with the adequate information about the WWP to make an informed

decision. In fact, many had limited awareness, or a state of having restricted knowledge or perception of the WWP, its features, and how to participate. For instance:

My office has not been very good in giving a lot of materials, whether it be about workplace wellness or even just health insurance in general. They kind of just say here's a plan, and you can figure it out. (Participant 5)

Due to this lack of information sharing, one participant took it upon herself to seek out the information. She explained:

I think I learned about the wellness things because I asked about them, as somebody who's relatively physically active. I'm just wondering and having had experienced that at previous employers... (Participant 9)

This lack of information was particularly evident with two participants who did not choose to join their organizations' WWP.

I don't see it really promoted that much to employees. (Participant 13)

It seemed complicated, like what's the point structure, like, how do you sign up for them and how many registrations are there, and like how many passwords do you need and like, make it easier to like understand the thing and the benefit and the offerings. (Participant 15)

Along these lines, one participant expressed frustration with the process used by his organization's Human Resources Office for notifying new employees of the on-site gym. The employees were notified through the onboarding process but there was no follow-up to further discuss or promote the use of the gym, which is free for employees. Moreover:

They have plopped it down there, and as you get oriented to your job, they're like, "Oh, this is our building, that's the other building, and there's a gym in there, you can use the gym. Alright, back over to here." [chuckle] If they were to just talk about the gym, at all, I think more people would go knowing that management is okay with you using the gym. Just talking about it would be encouragement enough for some people. As I said, it is there, and I think people are aware of it, but not everyone is aware and knows that it's open as often as it is. (Participant 3)

From these experiences, limited awareness about the program, its benefits, and how to partake in it was evident amongst many of the participants. Consequently, limited awareness was a predominant barrier to participation from the organizational level. Additionally, for those who do not participate in the WWP but are personally active, the lack of information from the organization appeared as one of the primary reasons for not joining the WWP. To increase awareness, communication was cited as a key aspect. Specifically, Participant 15 noted that the communications should be “thorough and regular and sporadic.”

Culture of Health (Organizational Bolster)

At the organizational level, most participants felt their employer generally supported their health and wellness. Along these lines, a culture of health is a workplace environment in “which individuals and their organizations are able to make healthy life choices within a larger social environment that values, provides, and promotes options that are capable of producing health and well-being for everyone regardless of background or environment,” according to the Robert Wood Johnson Foundation (as cited in Goetzel et al., 2014, p. 930). Within these workplaces, these employees were given the opportunity to take “full advantage of what they’re offering” (Participant 8).

More specifically:

Very positive. We are a healthcare company. And at J&J, we have what’s called a credo, which is a document that helps guide where our interests and where our focus should be. And employees are definitely in the credo as a major group to focus on. (Participant 6)

To support this culture of health, according to Bartz (2018), “Johnson & Johnson has continued to be an industry leader, most notably with its best-in-class health and

well-being programs” (p. 1). Isaac (2013) researched the “Life for Live” initiative at J&J, which started in 1979. This program extends a full range of health, wellness, and physical activity options for its employees, along with incentives and insurance discounts for participation. In particular:

The program includes offerings related to improving physical activity (such as on-site fitness centers, reimbursement for exercise expenditures, a pedometer program, and seasonal fitness challenges), guidance on nutrition (offering healthy cafeteria choices and online weight-management tools, and subsidizing Weight Watchers’ membership), lifestyle management, and computerized coaching programs (health coaching for blood pressure management, tobacco cessation, and blood lipid control), and chronic disease management. (Isaac, 2013, p. S32)

The participant from J&J positively felt the endorsement and implementation of this credo and programming, while many of the other participants did not experience the full depth of their program’s offerings beyond the general wellness support. In fact, although most of the organizations endorsed a culture of health and promoted wellness among the employees, the usage of the WWP and the ability to perform physical activity at work did not always translate to capacity at the individual level. Hence, a culture of health is a potential bolster in the decision-making process, yet not always a facilitator.

When asked this question on their organization’s view of health, the participants typically portrayed a feeling of uplifting positivity. A culture of health and encouragement of wellness bolstered the employee’s participation in the WWP. When the participants felt that their organization cared about their health and well-being, they were more likely to feel connected to the company and participate in the WWP.

Incentives and Reimbursements (Organizational Facilitator)

Although some overlap exists with the individual bolster of advantageousness, the organizational factor that most facilitated the participants to join and partake in the

activities of the wellness programs was by far the monetary incentives and insurance reimbursements. This overlap will be addressed in the Discussion section. An incentive is generally defined as a thing that motivates or drives one to behave in a certain way. Within the WWP, the incentives took various forms, including monetary, insurance discounts, funds in the HSA, and/or gym reimbursement/discounts. Here are a few examples of the incentives received by the participants:

And I do currently fulfill the like \$500 medical contribution that J&J gives, because I do my annual physical and like see the dentist. (Participant 6)

You can earn points rewards and a discount on your next year's insurance a discount rate of \$25 per pay period if you perform certain activities within the wellness program. (Participant 12)

They actually, you know, there is one other program they offer that will reimburse you up to \$200 a year, I believe, for gym membership or workout equipment, which is actually pretty nice. (Participant 2)

One participant who was highly motivated by the additional funds to his HSA described the point system to achieve the incentive. The points and challenges occurred throughout the year and had an additive effect on subsequent activities. Specifically:

Probably a very well calculated, you know tiered system so that throughout the entire year but it's attainable if you, you know if you if you're engaged, you know which I guess is the whole point right. (Participant 19)

On the other hand, although another participant was active and aware of the incentives, the monetary incentive was not enough to motivate her participation. In fact:

I would say, like, I'm not gonna turn down a financial incentive, but that clearly wasn't a driver enough for me. (Participant 15)

As a result of the incentives, most of the participants joined the WWP and completed the activities necessary to receive the incentive. The incentives and reimbursements positively motivated them to participate. Nevertheless, as noted under

the advantageousness theme, many of these employees were already physically active, so the incentive was just a “bonus.” On the other hand, for participants who did not partake in the WWP, the incentives did not facilitate their participation as intended. Thus, the role of incentives is considered further under the Implications for Practice section.

Trustworthiness

Through the data collection, validity was established and maintained through various research techniques. Two potential threats to the internal validity of the coding analysis may exist: (1) only one researcher analyzed and coded all the interviews and corresponding data and (2) the themes emerged through the analytical process. To enhance validity, the researcher regularly wrote memos about elucidations and new understandings and periodically discussed the emergent themes with the dissertation chair. Data triangulation from publicly available information on organizations’ WWP and prior research related to the themes also facilitated the emergent theoretical development. In terms of external validity, the depth of experiences and the cross-section of represented industries aided in the generalizability of the findings.

Summary

Within the semi-structured interviews, the 19 participants illustrated a vivid picture about how their organization influenced their decision whether or not to participate in physical activity within the WWP and in the workplace in general. The purposeful sampling and subsequent snowball sampling provided a diverse set of employees from various companies with WWP in the greater Philadelphia area. Since the sample included participants and non-participants in the WWP, the informants represented the continuum of experiences with the WWP, which provided a richness to

the data collection, subsequent analysis, and resulting themes. These experiences, along with external data sources, were continuously analyzed and compared against new data, until the establishment of the comprehensive themes. In answering the research question, these themes were then used to generate the theory that explained the decision-making process for the participants (Creswell, 2013). This theory and the resulting model are discussed in more detail in the subsequent Chapter.

From this analysis, three levels of decision-making emerged: individual, relational, and organizational, like the layered systems of the Social Ecological Model (Bronfenbrenner, 1977). In addition, three facets, including barriers, bolsters, and facilitators, appeared within each of these levels that shaped the experiences of the participants and their decision-making process. The themes in each of these areas were individual: time management, advantageousness, and need for movement; relational: supervisor ambivalence, social / “gregarious” connection, and messages from leadership; and organizational: limited awareness, culture of health, and incentives and reimbursements. Communication also arose heavily within the interviews, particularly related to the organizational barrier of limited awareness and the general lack of pertinent information on the WWP. Consequently, communication, along with other input from the participants, was integrated into the grounded theory in terms of how the employers can better facilitate participation within the WWP and physical activity in the workplace.

Overall, the research findings in this Chapter depicted the sample, the researcher’s analytical process, and the resulting themes. The facets and levels within the themes also started to uncover the relationships among the themes, which are further elaborated in the grounded theory and modeled presented in Chapter 5. The participants’ experiences and

descriptions of their decision-making process for whether or not to participate in physical activity in their organization's workplace wellness program (WWP) generated a meaningful narrative from which this theory was developed. Further, the Discussion of the Results, the Limitations, the Implications for Practice, and Recommendations for Future Research are summarized in the next Chapter.

CHAPTER 5: DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

From the qualitative research methodology, the depicted themes emerged from thorough data collection, triangulation, constant comparison, and the reflective process of the researcher. Overall, the participants' perceptions and rich experiences informed their decision-making process for whether or not to participate in physical activity in their organization's workplace wellness program (WWP). This process also made clear the relationships between the themes, which led to the development of a grounded theory and model. Although this model was developed from the deep experiences of the informants and analysis of the data, the relationships between the themes were corroborated by the theoretical frameworks of the Social Ecological Model and Self-Determination Theory, which were used to confirm aspects of the model.

Further, this model delivers a structure to support the implications for practice that can be employed by organizations to increase employee's participation in physical activity in the WWP and in the workplace in general. The model offers a means to enhance employees to join the WWP as well. Since increases in physical activity directly impact the health outcomes of employees, this increased participation has the potential to positively benefit the company, particularly enhancing the overall health and well-being of the employees and reducing insurance costs. These results also spark additional Recommendations for Future Research.

The experiences of the participants provided data for an inductive approach to grounded theory development. Through the analysis of the "patterns, categories, and themes" from the data collection, the theory, or pattern of meaning, percolated inductively from the "bottom up" (Creswell, 2013, p. 45). Additionally, the interviews

and data collection elucidated the participants' personal decision-making process for whether or not to participate in the workplace wellness program or to perform physical activity within the WWP became apparent. The informants' decisions were influenced across three levels, including the individual, relational, and organizational. Within each of these levels, three facets of barriers, bolsters, and facilitators impacted the decision. Resultingly, nine themes appeared from the three facets, across the three levels.

From these themes, facets, and levels, a decision-making model emerged from the grounded theory. This model is illustrated in *Figure 2*. According to Glader and Strauss (1967), grounded theories must satisfy the following criteria:

- (1) They would fit the real world;
- (2) They would work across a range of contexts;
- (3) They would be relevant to the people concerned; and
- (4) They would be readily modifiable. (as cited in Turner, 2014, p. 32)

With the diverse experiences, backgrounds, and industries of the participants, this model fulfills these criteria and can potentially be employed to develop policies and processes that increase communication and facilitate employees' participation in physical activity in the WWP and in the workplace in general.

Like the Social Ecological Model, the levels within this model mirror the interplay of the systems within the organization. Within the workplace environment, employees engage in various activities at each level, such as the individual, relational, and organizational. The interaction among the activities in these levels influences their behavior change and potentially enhances their well-being (Bronfenbrenner, 1977). Consequently, this model provides a map to resolve the barriers, trigger the bolsters, and foster the facilitators in the employees' decision-making process.

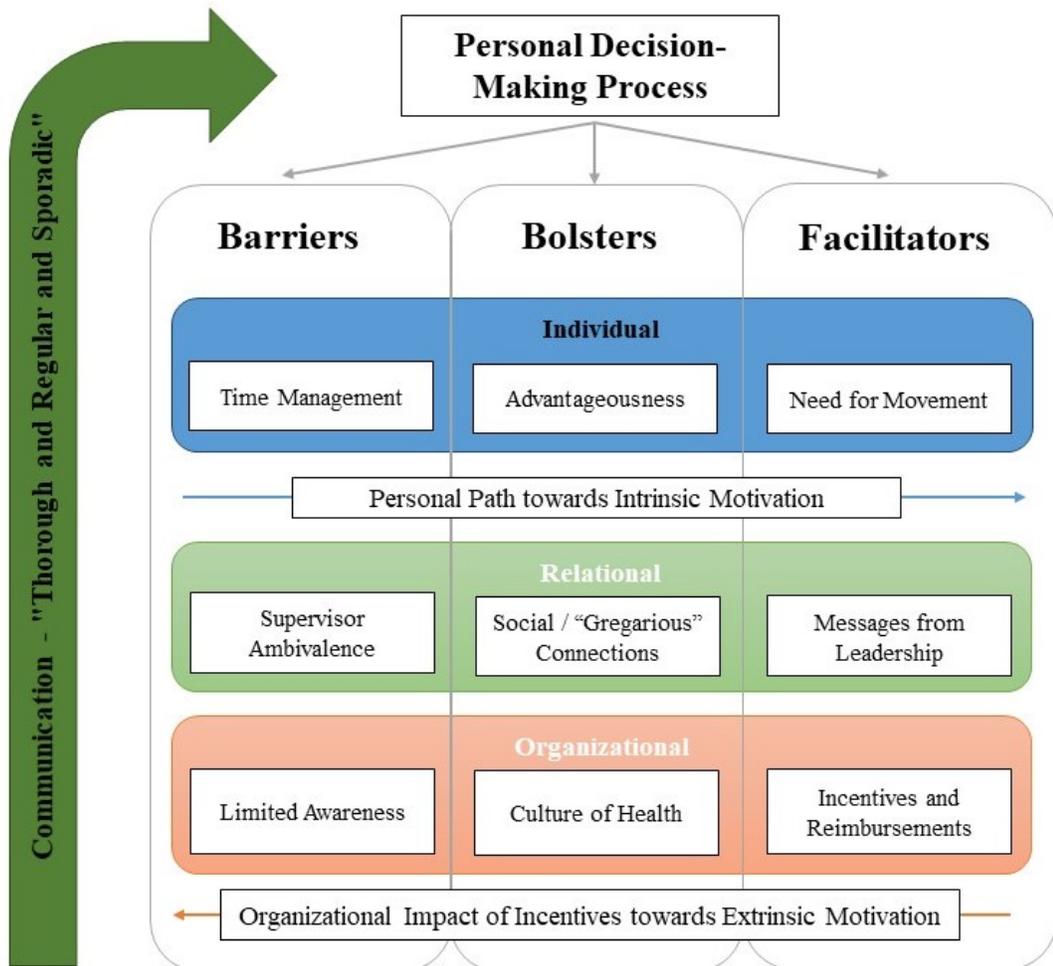


Figure 2. Personal Decision-Making Process for Participation in Physical Activity in the WWP and/or the Workplace.

Within this model, the participants' decision-making process is interspersed with their motivation to be physically active, akin to the continuum of motivation established by Ryan and Deci (2000). The participants experience a dichotomy within the motivational framework. At the individual level, the need for movement, or intrinsic motivation, facilitates their personal choice to join the WWP and engage in physical activity. This intrinsic motivation, along with the bolstered social support from their colleagues, enhances their long-term commitment and participation in physical activity. On the other hand, the organizations seek to increase participation using monetary incentives and reimbursements. Since these types of incentives are extrinsically motivating, their use elicits employees to commence behavior change. However, these types typically do not aid in the long-term maintenance of behavior change toward better health and well-being, except for the advantageous employees who are already active.

Thus, this model describes the interplay of the various levels and facets of the individual's decision-making process. In the Results of the Thematic Analysis section, the themes were presented according to the levels. Here, within the Discussion presented below, the themes are ordered based on the facets, with a focus on the barriers and the relationships among the bolsters and facilitators to positively shape the decision to participate in physical activity in the WWP and the workplace in general.

As a result of the interplay of the themes within the model, the nine themes were reduced to six areas for further discussion. The theme of limited awareness was expanded to include communication and the messages from leadership, since communication across all levels was necessary to improve awareness. Due to the way the incentives bolstered the individual participation, the advantageousness theme merged into the incentives and

reimbursements theme. Lastly, the need for movement theme was incorporated into the time management theme, as the participants felt that their organization needed to provide them with the time to fulfill their individual facilitator for physical activity in the workplace. These themes are then briefly revisited as Implications for Practice with six suggestions for organizations to employ to increase participation in their workplace wellness programs.

Discussion of Themes

Building Awareness through Communication

From the interviews, emails and newsletters appeared as the primary modes of communication about the WWP. According to Soucek and Moser (2010), email communication, due to their ease of distribution, tends to be popular in the workplace. “However, the ever-increasing volume of emails points to concerns of information overload and hindered information processing” by employees (p.1458). In addition to emails, a few participants also noted mailers to their homes, intranet sites, and flyers distributed during their onboarding process. Other potential options are text/SMS messages, company-sponsored calls, and verbal communication within company-wide meetings and trainings. According to Szrek et al. (2019), “reminder systems and text messaging address one of the key success indicators of incentive programs: communication. Employees targeted by an incentive have to know that it exists before they can change their behavior” (p. 290). From their research, the use of reminder messages increased completion of the incentive program amongst employee groups by 6–34 percentage points (Szrek et al., 2019).

In terms of the messaging content, the participants noted that more information on the programs, how to join, and how to collect points within the program would be helpful. Along those lines, Langille et al. (2011) determined that “personally relevant messages are more likely to influence and change attitudes toward physical activity behaviors than generalized information about fitness and health” (p. 311). Such messages included individualized physical activity prescriptions that focused on the results of the health and fitness assessments, rather than general feedback; comparisons between the employees and their co-workers; and specific tips on how to be more active. Further, the messaging should vary based on the level of physical activity of the participant.

Few participants received verbal affirmation from their organization’s leadership, yet those who experienced it were positively impacted through increased motivation to participate in physical activity competitions or classes. The messages were “best to come from the top, so you get the support if you want to do it” (Participant 10). Kent et al. (2016) extended this aspect by expressing the importance of “creating a ‘way of life’ in the workplace that integrates a total health model into every aspect of the business practice” (p. 119).

Although most participants noted receiving information about the WWP from their organization, typically the Human Resources office, they felt that the emails typically got lost amongst their normal workplace communications. This is supported by Szrek et al. (2019), who found that “one reason companies are having difficulty encouraging employees to enroll in wellness programs is because they do not necessarily have good systems for transmitting information to them” (p. 290). Acknowledging the potential for information overload, varied modes of communication throughout different

levels of the organization are necessary to build awareness among all staff. Participant 15 suggested that the communication should be “thorough and regular and sporadic.”

Supervisory Support

Although the leadership and organizational views supported a culture of health, the participants conveyed that this did not always translate to support from their supervisors. In fact, the supervisors were generally indifferent or ambivalent about any comments about or support of the WWP or physical activity. This supervisory ambivalence often prevented the participants from feeling comfortable to partake in physical activity during the confines of their workday. Similarly, Bredahl et al. (2015) found that “the interaction between the individual and the environment seems to be a stronger predictor of compliance than individual factors alone” (p. 10).

Through a study of supervisors at the Mayo Clinic, although most supervisors have “abundant resources but limited opportunities to use them,” they sensed an uneven commitment to employee well-being from the top leadership (Wieneke et al., 2019, p. 304). The supervisors at the Mayo Clinic also considered healthy behavior as the individual employee’s responsibility; thus, they did not want to overstep their boundaries as a supervisor by encouraging their employees to perform physical activity within the WWP. In another study on the *Working Healthy Project 2*, managers believed in offering WWP; however, lack of time and production conflicts were the biggest barriers to encouraging employee’s participation in WWP (Linnan et al., 2007). These findings from these prior studies suggest an underlying dilemma for the supervisor in promoting physical activity.

According to Kent et al. (2016), the support of middle managers is critical in influencing the success of the WWP, because they serve as the “direct link between the workers and leadership” (p. 118). Through their study on Booster Breaks, Taylor et al. (2013) also identified the need for “greater management support.” If a participant missed sessions often, their manager was typically cited as the excuse. “Suggestions included that managers should (i) participate in the Booster Break sessions, (ii) encourage participation in Booster Breaks, and (iii) not penalize employees who wish to participate in the session” (p. 420).

Consequently, when discussing ways to improve the workplace, supervisory support was mentioned as a need. “Even little comments” of encouragement could support participation, according to Participant 14. From prior research, like the employees, supervisors need support and messages from the organizational leadership to substantiate their support of the culture of health within the daily work environment and actively promote the WWP offered by the organization. In addition, the participants requested that their supervisors discuss the program with them and encourage them to partake in physical activity in the workplace and engage with the WWP.

Time Management, Scheduling Options, and Flexitime

When assessing the most cited barriers to physical activity, Patay et al. (2015) identified “(a) lack of time, (b) social influence, (c) lack of energy, (d) lack of motivation, (e) fear of injury, (f) lack of skill, (g) lack of resources, (h) weather conditions, (i) travel, and (j) family obligations” (p. 498). As previously presented, the workplace has often been seen as a viable option for physical activity, due to the amount of time spent at work

(Bailey et al., 2018). However, most of the participants in this study felt that they did not have sufficient time to work out within the confines of their workday.

Consequently, to enhance this access for employees, participants suggested that their organizations should “build time” into their workday by designating specific company-wide times for physical activity. Another option would be to give employees flexibility in their schedule for exercise during the day. This flextime could combat sedentariness in the workplace as well. According to Olsen et al. (2018), “contemporary workplace health promotion programs (WHPP) need to consider this shift to flexible work arrangements when planning and implementing interventions” (p. 345). Prior research has also revealed that “managers suggested that allowing more flexibility in the working day to allow employees to exercise and have time for meals would aid the health and wellbeing of their colleagues” (Donaldson-Feilder et al., 2017, p. 671).

In addition to flextime, one participant discussed a technique that she employed with her students as a teacher. She utilized “brain breaks” to break up the day and allow the students to refocus periodically. Participant 5 suggested:

Whether it even be providing like 10-minute exercise videos or something like that, that just pop up in our email every day like “hey take a brain break,” just like they do for students, it would be nice to see stuff like that happen. In general, as a teacher, I always had brain breaks, because you lose focus, you always, you’re tired if you’re in a stagnant position for how long...if kids can utilize it and be productive, it can [help] adults. We all need to move as humans.

Within workplace research, although strategies used to decrease prolonged sitting time have been shown “to improve acute cardiometabolic health outcomes in some but not all studies” (Chastin et al. 2015, as cited in Kowalsky et al., 2019), Wollseiffen et al. (2015)

discovered that brief breaks improved health and economic benefits and maintained workplace performance.

Likewise, Taylor (2011) developed a similar technique for brain breaks, called a Booster Break, to interrupt prolonged sitting in the workplace. Specifically, “the Booster Break is defined as an organized, routine work break designed to improve physical and mental health and job satisfaction while sustaining or enhancing productivity” (p. 71). In a subsequent study, Taylor et al. (2013) conducted a qualitative study to better understand the benefits of the Booster Breaks. From this research, the themes included:

The benefit themes were (i) reduced stress and promoted enjoyment, (ii) increased health awareness and facilitated behavior change, and (iii) enhanced workplace social interaction. The barrier themes were the need for (iv) greater variety in Booster Break routines and (v) greater management support. (p. 420)

Within the questionnaire from the current study, participants were asked “in an ideal situation, how much time during your workday would you like to use to participate in wellness or physical activity at your workplace?” The results indicated that short bouts of less than 10 minutes (N=6) and 31-40 minutes (N=5) had the highest representation among the sample. Generally, participants sought support through even small breaks in their day for movement and options from their employer to do so. These results are in line with a change to the latest edition of *Physical Activity Guidelines for Americans*, which were published after this survey was created. The Department of Health and Human Services (HHS) eliminated “the requirement for physical activity of adults to occur in bouts of at least 10 minutes,” rather adults are encouraged to perform even short episodes of movement throughout the day (2018, p. 6). Regardless of the length of time,

time management, scheduling options, and/or flextime were suggested to increase physical activity in the workplace.

Social / “Gregarious” Connections

Due to the encouragement and camaraderie from colleagues in the workplace, most participants commented on the positive impact of these social connections. This was evident in the bolstering of their involvement through group challenges and a sense of accountability, particularly when performing group activities or classes on site. Similarly, Olsen et al. (2018) found that “social connectedness was a desired characteristic of potential interventions” (p. 350). In fact, Kent et al. (2016) uncovered that “peer support, transparency, and forced accountability of the team-based competition has proven to be a bigger incentive for physical activity than the weekly prize” (p. 118).

The in vivo code of “gregarious” connections further expressed the importance of creating a supportive culture within the workplace. Donaldson-Feilder et al. (2017) also identified “support from others” as a way for employees to achieve physical activity (p. 666). Kent et al. (2016) noted that social support not only dictated initial engagement but forged long-term success of the behavior changes as well. Along these lines, several participants noted the desire for a “buddy system” within the workplace, mentioning that the accountability and support from a buddy would boost their physical activity.

A few participants took this idea a step further by introducing the idea of ambassadors or “champions” to promote physical activity and the WWP. These champions, like those used in the marketing world, would serve to support and announce organization-wide initiatives to other employees within their unit. These ambassadors would model positive behavior with physical activity within the WWP, which would

further normalize the behavior in the workplace and encourage others to partake. At the same time, these champions need to be strategically distributed throughout the organization. Olsen et al. (2018) discovered that “onsite workplace champions to promote behavior change were identified as potentially ineffective; if people were in varying locations many would ‘miss out’” (p. 349).

Generally, co-workers enhanced the participants’ experience within the WWP, by encouraging their physical activity and holding them accountable to workout. The group challenges and activities aided in further forging this connection and increasing participation. For those who sought “gregarious” motivation and camaraderie for activity, these connections were particularly important for bolstering their participation in physical activity in the workplace.

Culture of Health

Through a culture of health, most of the participants’ organizations placed value on employee health and generally encouraged wellness. This culture also bolstered employees’ participation in the WWP. When the participants felt that their organization cared about their health and well-being, they were more likely to feel connected to the company and participate in the WWP. Accordingly:

The workplace is suggested to be an ideal environment to promote both healthy dietary behavior and physical activity..., due to the structured environment, the ability to reach a wide number of people and the large proportion of time people spend at work... (Donaldson-Feilder et al., 2017, 663).

Although the participants connected with the feeling of the organizational culture of health, the feeling did not necessarily translate into perceived acceptance of physical activity in the workplace. In fact, a few participants mentioned a desire for their

organization to embrace health by making physical activity a “norm” in the workplace. By incorporating physical activity into the culture, the participants felt that exercise would be a normal “part of daily life” in the workplace. To exemplify the culture of health, the participants requested that their organizations actualized these values through practices that supported their well-being and their physical activity levels in the WWP.

Incentives and Reimbursements

From the experiences of the participants, monetary incentives, such as gift cards, insurance discounts, and funds to the HSA, are typically used to encourage joining and ongoing participation in the WWP. Stemming from behavioral economics, financial incentives are employed to encourage a desired behavior. “The basic argument is that they increase the value of the desired behavior, making it more attractive to individuals than the competing behavior” (Szrek et al., 2019, p. 289). Yet, the informants questioned the beneficial impact of such incentives on their actual behavior. Prior research on wellness programs indicated incentives often only have partial efficacy “...resulting in a problem: employers pay a substantial amount for wellness programs both in terms of program costs and in incentives to encourage enrollment” while anticipating the benefits to the employees and the firm (Szrek et al., 2019, p. 290). However, if employees do not enroll in the programs, they are not able to take advantage of these benefits.

When considering motivation from the framework of Self-Determination Theory, monetary-based incentives are an extrinsic form of motivation. Although extrinsic motivation may be used to commence a certain behavior, intrinsic motivation provides the highest degree of long-term behavior change, resulting from the “inherent satisfaction of the activity itself” (Ryan & Deci, 2000, p. 71). As noted under the advantageousness

theme, many of these employees were already physically active, so the incentive was just a “bonus,” but not an actual motivator. On the other hand, a few participants mentioned that the incentive was not enough to motivate them to join the WWP.

Therefore, companies should consider how to better reach those who are active but not motivated by money, while also targeting those who are not active already and ways to motivate their participation. Overall, based on SDT and the experiences of the participants, monetary incentives do not always function as intended to change the behavior towards participation in the WWP, let alone in physical activity, especially for long-term behavior change.

Additional Findings

Through the analysis of themes, three outlying experiences prompted the researcher to take pause in considering the appropriateness of encouraging physical activity in the workplace. These experiences centered around the American workplace culture, the role of the supervisor in supporting physical activity, and the feelings of coercion from a subset of the participants. Although these experiences were not reinforced across most participants, the topics are valuable considerations for organizations. Also, within the time management theme, seasonal changes in their motivation were evident amongst the participants.

Regarding physical activity participation in the workplace, one participant felt that the workplace may not be conducive for physical activity. This feeling was shaped by her attitude of the American workplace culture being solely for work, and not supportive of personal health pursuits. Although many researchers have shown the workplace to be an appropriate environment to promote physical activity, the workplace

may be better to promote activity outside of work. Similarly, Olsen et al. (2018) who discovered that “participants were not interested in WHPP targeting physical activity. Participants believed that physical activity was the individual’s responsibility and they preferred to do exercise/activities outside the work environment” (p. 348).

As a Director of Operations and Administration at a regional business school, the researcher has seen first-hand the competing demands of meeting work goals, while seeking to develop and maintain healthy behaviors. Employees struggle with completing their work tasks in order to free up time to participate in physical activity during the workday. The organizational culture and the examples from leadership and supervisors can sometimes provide conflicting information to the employees, which can also inhibit them from partaking in physical activity within the workplace.

Further, in the role of supervisor, the researcher feels the need to promote physical activity and wellness within the workplace. However, the overwhelming responses from employees and supervisors within this study showed an indifference and general lack of support for physical activity in the workplace and the WWP. Many reasons for this indifference may exist, particularly around not wanting to offend or target certain staff. Therefore, the support from the leadership to actualize the culture of health within the organization is of the utmost importance.

Within the theme of advantageousness, the sub-code of coercion/punitive was very surprising. These employees felt the potential negative impact for not participating in the WWP, which compelled them to participate. Wellness and WWP should encourage positive behaviors, rather than negative reinforcement, to facilitate long-term behavior change. From this experience, these participants felt that their company cared more about

their own bottom line and the benefits that they received from reduced insurance costs, compared to the well-being of the employees.

Many of the participants noted the seasons impacted their participation in physical activity. Particularly, their activity levels diminished in the wintertime. As organizations consider their communication plans, seasonal changes should also be considered and factored into the overall promotional plan, with specific tactics to facilitate additional physical activity in the winter.

Impact of COVID Pandemic

Given the current state of the COVID-19 pandemic and its impact on employees, a question specifically related to the impact of COVID was incorporated into the interview protocol. Interestingly, throughout the interviews, most of the participants described their activity within the context of pre-COVID or during COVID. Although a few participants mentioned being hopeful about returning to normalcy, all have learned to adapt, particularly their physical activity behaviors.

Specifically related to physical activity, the participants described several motivators and barriers. The motivators circled around the theme of time management. In working at home, the participants expressed more time and flexibility in their schedule to take breaks and create more of a routine, especially since their commute time was cut. The participants had more family support to remain active as well. On the contrary, the changes to the participants' schedules, particularly related to increases in family responsibilities, was one of the biggest barriers. Also, the forced limitation on group activities and the gyms being closed negatively impacted many of the participants.

Generally, the participants commented on the peaks and valleys or a rollercoaster in their motivation throughout the COVID pandemic.

Some cross-over exists between these categories based on the changes experienced by the individual participant because of COVID. A few participants worked from home prior to COVID, so the inability to participate in activities outside of the home was the biggest barrier for them. According to a recent study by Goethals et al. (2020), “the COVID pandemic has elicited the need to incorporate ‘a new culture into lifestyles’ to better facilitate physical activity, especially at home” (p. 3). Most who were active prior to the pandemic discovered ways to adapt to the changed environment so that they could remain active. However, the peaks and valleys of motivation remained throughout the pandemic, particularly for those who preferred group activities.

Limitations

This grounded theory study incorporated interviews, data collection, triangulation, constant comparison, and reflexive process. The recruitment process commenced using purposeful sampling, then rolled into snowball sampling. Although this process gained access to informants for the potential “identification and selection of information-rich cases related to the phenomenon of interest” (Palinkas et al., 2015, p. 533), actual participation and/or knowledge of the WWP was not guaranteed. Additionally, since the participants choose to move forward with the study, self-selection bias may have skewed the findings (Abraham, 2019). Also, the grounded theory process tends to focus on the development of a model to describe a particular phenomenon, rather than collecting or testing data through quantitative methods. Within the current study, testing of the resulting model was outside the scope and a limitation of the current study.

Due to the geographic locality, the types of positions held, and the educational level of the participants, the findings may not be generalizable to all types of employees, work environments, and organizations. Particularly, the findings may have been different from employees in service industry positions. Although the sample was distributed relatively equally between male and female participants, Caucasians represented the largest portion of ethnicity. Due to the homogeneity of ethnicities, the demographics of the sample may be considered another study limitation (Creswell, 2013). This study also did not consider marital status or dependents within the home, which may have an impact on the participants' ability to regularly perform physical activity.

Since most of the informants joined the WWP some time ago, their recollection of the decision-making process and experiences with the wellness programs were reported retrospectively, which may innately cause biases within the data collection. Further, study participants were not required to participate in the WWP offered by their employer. As a result, some of the information may not accurately represent the aspects of their organizations' program. However, these participants also elucidated their process for deciding not to participate, which provided an alternative experience from which to direct the development of the grounded theory.

Although only about 50% of the participants met the HHS's guidelines for weekly physical activity, all participants felt that they regularly exercised or performed physical activity during the interviews. Given the sample skewed towards physically active, this is a potential limitation to generalize the results to all employees, particularly those who are non-exercisers. Although the process was well-defined, replication of the analysis with a different set of participants, particularly who may not be as active as the current sample

may also be difficult for other researchers. At the same time, this is also a benefit of grounded theory building, which “is especially useful when novel theoretical understanding is required to create new insights, free of empirical confirmation” (Torraco, 2002, as cited in Turner, 2014).

Grounded theory development tends to limit prior theoretical frameworks within the literature review, design, and interview questions. However, the researcher’s previous knowledge and experience with the frameworks utilized in this study may have inadvertently influenced the observance and acknowledgement of the themes and levels presented. Further, by personally participating in the employer’s WWP and having knowledge from prior research studies on this topic, this researcher was an “insider in the process of the study” (Murphy et al., 2017, p. 293). Therefore, this prior experience may have created a confirmation bias on the part of the researcher. The researcher actively sought to minimize this bias through memo-writing about the emergent themes to focus on the lived experiences of the participants, rather than ideas from the researcher. The research also periodically discussed the topics and themes with the dissertation chair throughout the process of analysis.

Implications for Practice

In terms of implications for practice, this study utilized employees’ perceptions and experiences with their organizations’ WWP to develop a theory for facilitating physical activity participation within the WWP. The employees served as informants to describe their lived experiences with the WWP, which were then analyzed and compared against prior research to establish the decision-making process for whether or not to partake in physical activity within the WWP. As organizations seek to focus on wellness

and employee health to achieve the benefits to their bottom line, they also need to figure out how to better encourage and increase participation in WWP and in physical activity, especially for employees who are not already physically active.

From the model presented previously, the informants relayed their experiences through the various levels within the organization, including the individual, relational, and organizational. At each of these levels, the themes were grouped through the lens of barriers, bolsters, and facilitators. Although these distinctions were presented in the model, due to the interplay and interconnectedness of the themes, these nine themes were consolidated into six recommendations for companies to encourage and facilitate participation. Specifically, the theme of limited awareness integrated the messages from leadership and the overarching need for communication. The incentives and reimbursements theme was expanded to encapsulate advantageousness so that the companies consider the behaviors that are actually being reinforced, rather than those intended. Since time management is key for the employees to perform physical activity within the workplace, the need for movement facilitator was incorporated under the recommendation for scheduling options. The six recommendations are presented below:

1. Improve awareness by “thorough and regular and sporadic” communication.
2. Facilitate supervisor support through specialized training.
3. Provide scheduling options for physical activity within the workplace.
4. Capitalize on the social connections and encouragement among colleagues.
5. Maintain an overarching culture of health.
6. Reconsider the use of monetary incentives for long-term behavior change.

These aspects were corroborated in a prior study by Berry et al. (2010). Although their study concentrated on the WWP and the organization, rather than the individual, six pillars were identified as essential to a successful and strategically integrated WWP. These pillars are: (1) Multilevel leadership; (2) Alignment with company's identity and aspirations; (3) Scope, relevance, and quality; (4) Accessibility; (5) Partnerships (both internal and external); and (6) Communications (tailored for intended audiences) (p.112). These suggestions will be further elucidated below, along with recommendations for implementation.

Improve Awareness by “Thorough and Regular and Sporadic” Communication

To build awareness through “thorough and regular and sporadic” communication, strategic communications should be “tailored and targeted, multi channeled, bidirectional, with substantial consideration with optimum timing, frequency, and placement (Kent et al., 206, p. 121). A diverse communication plan should be further enhanced by messages from leadership. These messages serve to elevate the emails from HR or the insurance company to an actionable directive from the top and give employees' permission to partake in the WWP. In an ideal communication plan, messaging would be individually tailored to the employees to achieve the best motivation for behavior change and actual participation in physical activity within the WWP. The messaging should also come from all levels of the organization, involving leaders, managers, and employers, as stated by Kent et al. (2016), to ensure support and utilization. The timing of the communication should occur regularly throughout the year, especially around key decision-making periods related to the WWP and benefits.

Facilitate Supervisor Support through Specialized Training

“In workplace settings, the success of interventions will depend not only on the individuals they are designed to impact but also on the context in which these individuals work, particularly their line managers” (Donaldson-Feilder et al., 2017, p. 663). The current study extended this research by affirming the employee’s desire for support from the supervisor. Further, the participants requested that companies ensure that the supervisors are aware of the program aspects and support the supervisors in encouraging staff to participate.

According to the participants, this could be as small as words of encouragement. For this initiative to commence and be sustainable, supervisors should be trained in communicating workplace programs, similar to the “Supervisor Toolkit” and various workshops from the research with the Mayo Clinic (Wieneke et al., 2019). Further, the supervisors should be provided with sample communication templates to share with their employees. This training should also integrate support from the leadership level, which would buttress the support from the supervisors themselves by the organization to promote physical activity in the WWP and the workplace in general.

Provide Scheduling Options for Physical Activity within the Workplace

Many participants felt that they had limited control of their daily schedules. To further facilitate movement throughout the day, organizations should consider ways to enhance the employees’ need for movement with organized, endorsed activities for the employees, either through short bouts of activities, such as Booster Breaks (Taylor, 2011), or longer, formalized activities across the entire organization during the workday,

like group competitions. Along these lines, the *Physical Activity Guidelines for Americans* suggest that even short episodes of walking can provide health benefits and should be considered in the overall physical activity plan (2018). The participants also seek “permission” of the managers to adapt their schedules in this way; therefore, scheduling options should be included in the supervisor training as well.

Capitalize on the Social Connections and Encouragement among Colleagues

Through the social connections within the workplace, group activities and competitions supported the participants’ engagement with the WWP. Organizations should capitalize on this social motivation to enhance participation among other employees. The usage of ambassadors and/or a buddy system could also provide an added dimension to the promotion strategy within the organization. The accountability and competition from group challenges further enhance this social support.

Maintain an Overarching Culture of Health

Although most participants noted that their organizations supported a culture of health, this culture did not always translate into action at the relational and individual levels. For the WWP to be effective, the culture of health should translate to verbalized support of physical activity in the workplace, particularly from the supervisors and the organization’s leadership. As discussed under the Improving Awareness section and advocated by SEM, to maintain the organizational culture of health, this support needs to occur at all levels, including the leaders, supervisors, peers, and employees.

Reconsider the Use of Monetary Incentives for Long-Term Behavior Change

These current monetary-based incentives do not necessarily lead to long-term behavior change. As a result, companies should assess the ways in which to truly

motivate employees to participate in the WWP. To enhance long-term behavior change, intrinsic motivation, or internal tendencies, are more likely to incite an individual to act. Such activities enable the individual to seek challenges and novelty due to the “inherent satisfaction of the activity itself” (Ryan & Deci, 2000, p. 71). Therefore, companies should re-consider the utility of the points and monetary incentives. Rather than extrinsic motivation tools, organizations should determine new mechanisms for facilitating participation through engaging, fun activities. By promoting intrinsic motivation and enhancing employees’ ability to maintain a physically active lifestyle for the longer term, the organizations will have the best return on the monetary investment of the WWP.

Recommendations for Future Research

In addition to some of the areas for further research identified based on the limitations, a few additional areas for future research arose from this research study. Overall, this research produced recommendations for companies to encourage and facilitate participation; however, they were not tested. Thus, future research could use these aspects to develop an intervention to increase physical activity in the WWP and in the workplace in general. The findings from this intervention could also provide the impetus for another study concerning the expected health changes from participation in physical activity within WWP. These outcomes have the potential to elucidate some of the factors that may improve employee health.

The role of the supervisor as indifferent or ambivalent appeared through nearly all the interviews. Further research on the role of the supervisors in promoting the WWP and physical activity specifically is important, resulting from the perceived conflict in physical activity promotion for the staff found by Wieneke et al. (2019). Along those

lines, the source of the communications and messaging in the awareness plan should also be considered, especially related to the use of workplace wellness ambassadors.

Although the participants suggested short bouts or 31-40 minutes of exercise at work as ideal, even short, one-minute episodes of exercise and resistance exercise breaks have been shown to provide health promoting effects, such as a reduction in glucose metabolism (*Physical Activity Guidelines for Americans*, 2018; Kowalsky et al., 2019). Therefore, the most beneficial length of time to exercise in the workplace should be assessed in future research. A few participants also mentioned the positive mental effects of being able to perform physical activity at work. By combining these two concepts, a future study could consider the ideal amount of time performing physical activity needed to enhance productivity and cognitive functioning in the workplace, which could extend the research by Wollseiffen et al. (2016) as well. Since most participants were already physically active, future considerations should also investigate non-exercisers to assess their participation in the WWP and their general levels of physical activity in general.

Conclusion

The perceptions of the participants in this study offered a glimpse into the employees' decision-making process for determining whether or not to participate in the WWP and specifically partake in physical activity in the WWP and in the workplace in general. Their experiences provided the primary basis for a model to describe this decision-making process, which elucidated specific suggestions for organizations to use to increase motivation to participate in physical activity in the WWP.

Through inductive analysis, three levels of decision-making emerged: individual, relational, and organizational. In addition, three facets, including barriers, bolsters, and

facilitators, appeared within each of these levels that forged the experiences of the participants and their decision-making process. The emergent themes were individual: time management, advantageousness and need for movement; relational: supervisor ambivalence, social / “gregarious” connection, and messages from leadership; organizational: limited awareness, culture of health, and incentives and reimbursements. As described in *Figure 2*, communication, along with other input from the participants, was integrated into the grounded theory model for personal decision-making process and the specific recommendations for organizations. These recommendations will aid the employees’ decision-making process to better facilitate participation within the WWP and incorporate physical activity into the workplace in general, even if only in short episodes of activity or “brain breaks.”

At the end of the workday, “the physical impacts of prolonged occupational sitting can lead to increased financial costs to organizations. These include both direct costs, such as occupational-related injury, and indirect costs through absenteeism” (Olsen et al., 2018). Therefore, the impetus is on the organization to use the feedback from the employees from this study, the grounded theory, and the resulting recommendations to implement changes to the policies, procedures, and communication strategy for the workplace wellness program to ultimately increase participation in physical activity. The results will not only improve the well-being and health of its employees but will decrease insurance costs and, in turn, improve the organization’s bottom line.

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APPENDIX A: DEMOGRAPHIC, WORKPLACE, EMPLOYEE HEALTH, AND
PHYSICAL ACTIVITY QUESTIONNAIRE

Start of Block: Default Question Block

Thank you for your potential interest in participating in the Get Moving Study.

Your responses from the enclosed surveys (the *Demographic and Workplace Questionnaire* and the Employee Health and Physical Activity Survey) will remain confidential. Completion of these surveys is required for participation in the Get Moving Study. Your responses will be used to determine your eligibility to participate in the Get Moving Study.

After completion of the surveys, the doctoral student researcher will contact eligible participants to schedule a semi-structured interview, which will last approximately 30-45 minutes.

Q1 First Name:

Q2 Last Name:

Q3 Email Address:

Q4 Phone Number:

Q5 Gender:

- Male (4)
- Female (5)
- Non-Binary / Third Gender (6)
- Prefer not to say (7)

Q6 Age:

- 18-24 years old (1)
- 25-34 years old (2)
- 35-44 years old (3)
- 45-54 years old (4)
- 55-64 years old (5)
- 65-70 years old (6)
- 70+ years old (7)

Q7 Please specify your ethnicity:

- Caucasian (1)
 - Black or African American (2)
 - Asian (3)
 - Native Hawaiian or Pacific Islander (4)
 - Native Indian or Alaska Native (5)
 - Multi-Racial (6)
 - Would rather not say (7)
 - Other (8)
-

Q8 Are you Hispanic or Latino?

- Yes (1)
 - No (2)
 - Would rather not say (3)
-

Q9 What is your current marital status?

- Married (1)
 - Divorced (2)
 - Widowed (3)
 - Separated (4)
 - Never Married (5)
 - Member of Unmarried Couple (6)
-

Q10 What is the highest level of school you have completed? If you are currently enrolled, list the highest degree that you have already received.

- Grade 12 or GED (high school graduate) (1)
 - College 1 year to 3 years (some college or technical school) (2)
 - College 4 years or more (college graduate) (3)
 - Master's degree (4)
 - Professional degree (5)
 - Doctorate degree (6)
-

Page Break

Q11 Are you currently employed?

Yes (1)

No (2)

Q12 If employed, have you worked at your current employer for six months or more?

Yes (1)

No (2)

Q13 Position Title:

Q14 Department/Area:

Q15 Name of Employer (Optional):

Q16 What role best describes your position at your workplace?

- Administrative Services: Administrative support (1)
- Facility Services: Professional building and life safety services support (2)
- Finance: Encompassing budget and fiscal planning, accounting, business affairs, physician billing, internal audit, grant accounting and purchasing services support (3)
- Health Services: Specialized clinical services support (4)
- Information and Media Services: Information services and technology applications services support (5)
- Leadership: Leadership and strategic decision-making for, and management of business units or departments (6)
- Professional Services: Members of the professional role have a body of knowledge normally acquired through an undergraduate program or higher that is applied to the business operations, such as Human Resources (7)
- Protective Services: Members in the protective services role have the specific training and knowledge necessary to uphold/maintain security and safety. (8)
- Educational or Student Services: Educators or offices related to athletics, recreation, housing, student health, entertainment services, and various professional fields (enrollment, student affairs, advising, financial aid, admissions, career development) that support students, the community, and/or the University (9)
- Technical and Research Services: Technical, scientific, or social research expertise, including grant focused positions (10)
- Other: (11) _____

Q17 What is your level of supervisory responsibility?

- No Supervisory Responsibility (1)
 - Team Leader (2)
 - First-Line Supervisor (3)
 - Manager (4)
 - Executive (5)
-

Q18 In what type of organization do you work?

- Arts and Entertainment (1)
- Building and Facilities Maintenance / Construction (2)
- Business and Financial Operations (3)
- Community and Social Services (4)
- Education (5)
- Farming, Fishing, and Forestry (6)
- Food/Restaurant (7)
- Healthcare and Health Services (8)
- Information Technology (9)
- Legal (10)
- Military-Related (11)
- Office and Administrative Support (12)
- Personal Care and Service (13)
- Production (14)
- Protective Service (15)
- Sales (16)
- Transportation (17)
- Other: (18) _____

Q19 Approximately how many employees work at your organization?

- 1-25 (1)
- 25-50 (2)
- 50-100 (3)
- 101-1,000 (4)
- 1,001-10,000 (5)
- 10,001-50,000 (6)
- 50,001 or more (7)
- Not sure (8)

Q20 Does your employer offer a Workplace Wellness Program or other Employee Health Management Program, includes programs offered by your insurance?

- Yes (1)
 - No (2)
-

Q21 Is physical activity participation included in your organization's Workplace Wellness Program?

- Yes (1)
 - No (2)
 - Don't know/not sure (3)
-

Q22 Would you be available for a 30-45 minute virtual interview?

- Yes (1)
 - No (2)
-

Q23 What is your preferred mode for the interview?

- Virtually - phone call (1)
 - Virtually - web conference tool (2)
-

Q24 What is the best time(s) for the interview?

- Before/after work in the morning (1)
 - In the morning (2)
 - At lunch (3)
 - In the afternoon (4)
 - Before/after work in the evening (5)
-

Page Break

Q25 Employee Health and Physical Activity Survey

(excerpted physical activity and wellness-related questions from the CDC Employee Health Assessment [CAPTURE™], 2005)

Q26 Health Status: Would you say that in general your health is? (Source: BRFSS)

- Excellent (1)
- Very good (2)
- Good (3)
- Fair (4)
- Poor (5)
- Don't know/not sure (6)

Q27 Physical Activity: During the past month, other than your regular job, did you participate in any physical activities or exercises, such as running, calisthenics, golf, gardening, or walking for exercise? (Source: BRFSS)

- Yes (1)
 - No (2)
 - No (3)
-

Q28 Consider the physical activity or exercise that you performed during the past month.

Q29 How many times did you take part in physical activity or exercise during the past month? (Source: BRFSS)

0 2 4 6 8 10 12 14 17 19 21 23 25 27 29 31



Q30 When you took part in physical activity or exercise, for how many minutes did you usually keep at it? (Source: BRFSS)

0 10 20 30 40 50 60 70 80 90 100 110 120



Q31 When you took part in these activities, how intense was your exercise session?

(Source: BRFSS)

- Low (can sing a song) (1)
 - Moderate (can carry on a conversation) (2)
 - High (can only say short sentences) (3)
 - Very high (winded/single words only) (4)
-

Q32 During your workday, are you able to dedicate time to wellness or physical activity at your workplace?

- Yes (6)
 - Sometimes (7)
 - Rarely (9)
 - Never (8)
-

Q33 In an ideal situation, how much time during your workday would you like to use to participate in wellness or physical activity at your workplace?

- None (8)
- Short bouts of less than 10 minutes (1)
- 10-20 minutes (2)
- 21-30 minutes (3)
- 31-40 minutes (4)
- 41-50 minutes (5)
- 51-60 minutes (6)

End of Block: Default Question Block

References Cited for Survey
(from CDC Employee Health Assessment [CAPTURE™], 2005)

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APPENDIX B: SEMI-STRUCTURED INTERVIEW GUIDE

1. Please tell me about your current participation in physical activity or exercise.
2. Describe your understanding of the Workplace Wellness Program (WWP) offered by your employer.
3. Describe your level of participation in physical activity within the WWP, including the kind of exercise are you able and/or willing to do within the confines of your workday.
4. What was your process for selecting whether or not to participate in physical activity within your WWP?
5. How would you describe your organization's overall view of health and wellness?
6. What role has your supervisor played in your participation?
7. How have your colleagues played a role in your participation?
8. In what ways could your organization facilitate your participation in regular physical activity? What is missing that might promote your physical activity levels within the WWP?
9. How has COVID impacted your participation in physical activity? Within the WWP?
10. What else would you like to share with me about physical activity within the WWP or physical activity at your workplace in general?