2013

Health Promotion in the Workplace: Exploring Perspectives of Barriers and Incentives to Employee Participation

Amanda Conlon
Minnesota State University, Mankato

Health Promotion in the Workplace: Exploring Perspectives of Barriers and Incentives to Employee Participation

By:

Amanda Conlon

A Thesis Paper Submitted in Partial Fulfillment of the

Requirements for the Degree of

Master of Science

in

Community Health Education

Minnesota State University

Mankato, Minnesota

May, 2013

This thesis paper has been examined and approved by the following members of the thesis paper committee.

Judith K. Luebke, Ph.D., MCHES., Advisor

Joye M. Bond, Ph.D., RD

Autumn Hamilton, H.S.D

Abstract

The numbers of worksite health promotion programs in the United States has grown over the past 30 years. However, some of today's programs lack one or more of the fundamentals needed to achieve their goals. Common shortcomings include poor participation levels, lack of appropriate incentives, lack of options for program delivery, and lack of tailoring programs to meet the needs and wants of a diverse workforce.

The purpose of this study was to identify what influences employees' decisions regarding participation in worksite wellness programs. Opinions of eligible worksite health promotion participants were collected using a web-based questionnaire adopted from the 2004 Porter Novelli HealthStyles Questionnaire (n = 437). Percentages of responses were calculated by frequency counts.

Among the employees who responded to the survey 71.3% were female, 45.0% were faculty, and the mean age was 46.13 years. Respondents reported they would be very likely to use paid time to exercise at work (71.8%). The most frequently reported preferred program were personalized diet or exercise counseling (58.5%). The most commonly reported barriers to using worksite wellness services were no time during the work day (67%) and the most commonly reported incentives for utilizing employee wellness services were having programs held at a convenient time (81.7%). The findings from this study present several opportunities to further explore best practices of health promotion among within the University and other workplace wellness programs.

Keywords: health promotion programs, participation barriers, participation incentives, health expenditures, transtheoretical model

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Chapter One: Introduction

Introduction

This study investigated employees' perspectives of barriers and incentives for participation in worksite health promotion programs. The International Association of Worksite Health Promotion defined worksite health promotion as "a corporate worksite set of strategic and tactical actions that seek to optimize worker health and business performance through the collective efforts of employees, families, employers, communities, and society at large" (Chenoweth, 2011, p. 12).

Worksite health promotion is a changing field that has continued to evolve over the last twenty years. In the 1980s, less than five percent of employers offered any kind of health promotion program. This changed dramatically in the 1990s as over 80% of employers with 50 or more employees offered health promotion programs (O'Donnell, 2002). The most common reasons given for establishing worksite health promotion interventions are to attract and retain good employees, keep workers healthy, improve employee morale, improve employee productivity, and contain employee health care costs (Riedel, Lynch, Basse, Hymel, & Peterson, 2001).

The majority of Americans spend a substantial amount of time at the workplace and, as a result, the workplace has become a common place to promote health. There is a strong business case to be made for worksite health promotion programs with all the benefits that companies can possibly gain when they implement and continue to have effective worksite health promotion programs. A meta-evaluation of 56 studies published during 1982-2005 found that worksite health promotion produced on average a decrease

of 26.8% in sick leave absenteeism, a decrease of 26.1% in health costs, a decrease of 32% in workers' compensation costs and disability management claims costs, and a cost-benefit ratio of 5.81 (Chapman, 2005). Companies with worksite health promotion programs are positioned to obtain these benefits, encouraging employees to be healthier, more productive, and more consumer oriented.

Although the growth in worksite health promotion programs has been impressive over the past 30 years, some of today's programs lack one or more of the basic fundamentals needed to achieve their goals. Common shortcomings include poor participation levels, lack of appropriate incentives, lack of options for program delivery, and lack of tailoring programs to meet the needs and wants of a diverse workforce (Chenoweth, 2011).

Engaging employees in positive lifestyle behaviors is the first step toward making workplace wellness programs successful for employers. Successful worksite health promotion programs depend on the employees' readiness to participate. Therefore, it is important to collect employees' opinions of perceived barriers and incentives for participating in the programs in order to make programs appropriate and appealing for participation for each employee population (Cox, 2003).

The stages of change, a construct of the transtheoretical model, suggests that health behavior change involves progress through six stages of change: precontemplation, contemplation, preparation, action, maintenance, and termination. Research has demonstrated improvements in recruitment, retention, and progress using stage-matched interventions and proactive recruitment procedures. If results with stage-matched interventions continue to be replicated, health promotion programs will be able to

generate positive impacts on at-risk populations. These positive impacts could include decreasing negative behaviors such as smoking and alcohol use or increasing healthy behaviors such as exercise and health eating (Prochaska & Velicer, 1997).

Worksite health promotion programs can be integrated into many worksites. It is important to identify employees' perceived barriers and perceived incentives in order to effectively achieve the benefits of worksite health promotion programs in addressing healthy lifestyle behaviors.

Significance of the Study

Employer sponsored wellness initiatives are becoming more prevalent. *Healthy People 2020* guidelines support the need for increasing the proportion of employees who participate in employer-sponsored health promotion activities (United States Department of Health and Human Services [USDHHS], 2012). These programs are important because of the escalating cost of medical care and the resulting cost burden that employers carry in direct medical costs and indirect costs such as absenteeism, presenteeism, and disability. Worksite health promotion and disease prevention are important initiatives to decrease costs.

Understanding the perspectives and preferences of the target audience is fundamental to positively influence people's participation in healthy lifestyle behaviors in worksite health promotion programs. This study explored employees' perceptions of barriers and incentives on participating in worksite health promotion programs.

Purpose of the Study

The purpose of this study was to identify what influences employees' decisions regarding participation in worksite wellness programs. Another purpose of the study was

to add knowledge about the barriers and incentives to the body of previous research on increasing worksite wellness participation.

Research Questions

This study attempted to answer the following questions:

1. What worksite wellness programs would employees most likely use?
2. What types of worksite wellness programs do employees prefer?
3. What are employees' perceived barriers to participation in worksite wellness programs?
4. What are employees' perceived incentives to participation in worksite wellness programs?

Limitations

The limitations of this study included the following:

1. Data collected were self-reported.
2. Because of the instrument was electronically distributed, it is difficult to verify the honesty, attitude, and seriousness of the participants.
3. The survey was administered through email, therefore, no one was present to provide direction or probe for clarification to resolve contradictory information.
4. Data were collected from a voluntary sample.

Delimitations

The delimitations of this study included the following:

1. Participation in this study is delimited to a survey of adult employees of one worksite location within an organization located in Minnesota.
2. The questionnaire was administered in February, 2013.

3. The research instrument used for this study was distributed only through email.

Assumptions

The assumptions of this study included the following:

1. Participants answered the questionnaire honestly and to the best of their ability.
2. All participants could read and understand the questionnaire.
3. Anonymous questionnaires are valid instruments to measure perceived barriers and incentives to participation in worksite wellness programs.
4. Findings of the research were representative of the population studied.
5. The survey used was valid and reliable.

Definition of Terms

For the purposes of this study, the following terms are defined:

Absenteeism: "any time away from scheduled work" (Booyens, 1998, p. 355)

Healthy People 2020: "is a program of nationwide health promotion and disease prevention goals that provides science-based, 10-year national objectives for improving the health of all Americans" (USDHHS, 2012).

Incentives: "financial and nonfinancial rewards linked to specific behaviors" (Taitel, Haufle, Heck, Loeppke, & Fetterolf, 2008, p. 865).

Presenteeism: "a reduction in productivity because of health-related conditions" (French, 2011, p. 53).

Return on investment (ROI): "net operating income divided by average operating assets" (Ojugo, 2009, p. 356).

Transtheoretical model: "a theory that uses stages of change to integrate processes and principles of change across major theories of intervention" (Glanz, Rimer, & Viswanath, 2008, p. 97).

Worksite health promotion: "a corporate set of strategic and tactical actions that seek to optimize worker health and business performance through the collective efforts of employees, families, employers, communities, and society at large" (Chenoweth, 2011, p. 12).

Summary

This chapter provided a short synopsis on the history and scope of worksite health promotion programs, along with its value impact within the workplace. Current fundamentals and shortcoming of worksite health promotion programs were also discussed. This chapter also discussed the purpose and significance of this study, research questions, limitations, delimitations, and assumptions of this study.

Chapter Two: Literature Review

Introduction

This chapter reviews, in detail, literature relevant to the purpose of this study which is to understand employees' perspectives and preferences that influence their participation in worksite health promotion programs. Specifically, this chapter reviews literature relating to workplace health expenditures, worksite health promotion, employee health, and employer outcomes of worksite health promotion programs, and behavior theory regarding worksite health promotion programs. The chapter concludes with a review of recent findings in worksite health promotion program participation factors, specifically rates of participation and perspectives of incentives and barriers.

Workplace Health Expenditures

The central driving force behind the growing interest of employers in providing worksite health promotion services to their employees is, unquestionably, rapidly rising health care costs. In 2006, United States health care spending was reported to be more than two trillion dollars and employers, on average, paid more than one third of this cost (Baicker, Cutler, & Song, 2010).

Many employers associate poor health with reduced employee performance safety, and morale. The organizational costs of workers in poor health, and those with behavioral risk factors include high medical, disability and workers compensation expenses. Cost is also associated with elevated absenteeism and decreased productivity at work, referred to presenteeism (Goetzel, Hawkins, Ozminkowski, & Wang, 2003).

Today, many employers provide worksite health promotion programs because they believe that good health care prevention programs increase worker productivity and organizational effectiveness. Their view is that paying for quality health care and worksite health promotion programs is not just the cost of doing business, but rather is an investment in their employees (Goetzel & Ozminkowski, 2008).

Pepsi Bottling Group wanted to predict how improvements to employees' health risk profiles could potentially lower health and productivity related costs. Company staff analyzed experience across multiple benefit program areas and data types to determine the relationship between individual health risks and costs. Pepsi Bottling Group's analysis showed how health risk factors can influence direct medical costs and costs associated with productivity related outcomes. They found that a large reduction in the prevalence of health risks could yield annual workers' compensation savings of $733,260, with 66% of those savings being realized from a reduction in weight risk and 15% associated reduced stress (Carls et al., 2007).

There is a growing, but still limited, body of literature that demonstrates a strong association between employee poor health and employee productivity loss (Kessler, Greenberg, Mickelson, Meneades, & Wang, 2001). For example, the cost of obesity among U.S. full time employees is estimated to be $73.1 billion, according to a study published in October 2010 by Duke University obesity researchers. Researchers discovered that the per capita costs of obesity are as high as $16,900 for obese women and $15,500 for obese men. Presenteeism and absenteeism makes up the largest share of those costs (Finkelstein, DiBonaventura, Burgess, & Hale, 2010).

Presenteeism is highly prevalent and costly to employers. It is defined as being present at work, but limited in some aspect of job performance by a health problem. Potential risk factors contributing to presenteeism include being overweight, a poor diet, lack of exercise, high stress, and poor relations with co-workers and management (Ammendolia, Cancelliere, Cassidy, & Cote, 2011).

Absenteeism refers to an employee's time away from work due to illness or disability. It is estimated that four to ten percent of the United States workforce is not at work on any given day (Bureau of Labor Statistics, 2005). The ability to enhance workforce output and minimize loss due to absenteeism represents a tremendous advantage in the global economic environment. Many employers are plagued by the rising frequency and duration of leaves related to the poor health of employees. There is a growing awareness that absent workers create a direct drain on profitability due to reduced productivity and increased expense (Ammendolia, et al., 2011).

Similarly, Goetzel, Guindon, Turshen, and Ozminkowski (2001) have suggested that more than half of employers' health and productivity-related expenses exist in more indirect ways such as absenteeism from work and presenteeism at work. Although these costs are not direct medical costs they are most often a result of related medical conditions.

Worksite Health Promotion

One strategy to improve individual health as well as the success of businesses is health promotion programs at the worksite. Worksite health promotion programs are employer initiatives directed at improving the health and well-being of workers and, in some cases, their dependents. These initiatives include programs designed to avert the

occurrence of disease or the progression of disease from its unrecognized stage to one that is more severe (Goetzel & Ozminkowski, 2008).

The workplace presents a useful setting for introducing and maintaining health promotion programs for working age adults because the majority of Americans spend a substantial amount of their time at work. In 2006, more than 60% of the United States populations aged at least 16 years or older were employed by public or private employers (Goetzel & Ozminkowski, 2008).

Good employee health has the potential to improve company profitability and help achieve other organizational goals because the objectives of health promotion can be aligned with the organization's mission. Social and organizational policies and social norms can help direct certain behaviors and discourage others, and financial or other incentives can be introduced to encourage participation in programs (Goetzel & Ozminkowski, 2008).

Worksite health promotion has become an important objective in the United States Department of Health and Human Services, Healthy People initiatives. *Healthy People 2020* encourages an increase of the proportion of worksites that offer an employee health promotion program to their employees. *Healthy People 2020* challenges individuals, communities and professionals to take specific steps to ensure good health by mobilizing key individuals and organizations into a coalition, assessing both community needs and assets, creating an action plan, implementing the strategies, and measuring the progress over time. (USDHHS, 2012).

Outcomes of Worksite Health Promotion

Outcomes of worksite health promotion include employee health outcomes and employer outcomes.

Employee health outcomes. When successfully implemented, worksite health promotion programs have shown to benefit the health of employees. In response to increasingly high rates of chronic conditions such as obesity, diabetes, heart disease, and cancer, a study by the Salt Lake Valley Health Department was conducted by establishing a worksite intervention called the Healthy Lifestyle Incentive Program (Kumpfer, Merrill, & Neville, 2010). Like other employers providing health care insurance to the workplace, Salt Lake County Government has been affected by increasing costs resulting from these chronic diseases. From 2001 to 2005, municipal employees' health care costs increased by 63%, whereas, general budgets increased by 15%. The increase in health care insurance costs from 2001 to 2008 was 95.2% among Salt Lake City government employees (Kumpfer et al., 2010).

The Salt Lake County study evaluated health benefits of long-term participation in an employer-based wellness program, focusing on the following selected chronic disease risk factors: clinical measures of weight; blood pressure; cholesterol; and body fat percentage. A repeated longitudinal time-series study was conducted for eight years using existing annual data. Two years after the implementation of Healthy Lifestyle Incentive Program, its impact on health risk factors was assessed. Findings showed significant improvements in the 304 participants in body fat, cholesterol, blood pressure, physical activity, smoking prevalence, and seat belt use (Kumpfer et al., 2010).

Healthy Lifestyle Incentive Program participants experienced lower increases in body mass index (BMI), blood pressure, and cholesterol. Findings also revealed lower increases in BMI than the general population during the same time period, likely resulting in lower risk for diabetes and other chronic diseases. The greatest improvements in BMI, blood pressure, and cholesterol occurred in those at highest risk levels at baseline. The findings suggest that recruitment efforts should focus on employees with higher health risks, and program efforts should emphasize retention and increased levels of participation to increase a higher level of success (Kumpfer et al., 2010).

Employer outcomes. Successful worksite health promotion programs have been shown not only to considerably improve the health of employees, but also the financial outcome of their employers. A critical review done by Biacker and associates (2010) suggests that employer based wellness initiatives may not only improve health, but may also result in substantial savings.

Baicker and associates (2010) reviewed 22 studies that reported on the impact of wellness programs on employee health care costs. The study standardized the costs and benefits of each program to annual figures and by using reported figures for program costs they were able to calculate a return on investment for each study group. The researchers found, for the average across all programs in which they were reported, that interventions produced $358 per year in savings through reduced health costs per employee, while costing the employer $144 per employee per year. For studies that reported programs costs, the average calculated return on investment was $3.37, meaning that for every dollar spent, $3.37 was saved.

A meta-analysis study conducted by Baicker and associates (2010) also looked at the impact of 32 worksite health promotion programs on absenteeism. These studies were carried out for two years. Baicker and colleagues (2010) monetized absentee days using the average hourly wage rate in 2009 of $20.49. They found that the average program savings across the studies was $294 per employee per year, while program costs were $132 per employee per year. Twelve of the studies reported programs costs and the average calculated return on investment for these twelve studies was $3.27. The review of this evidence suggests that employers with large numbers of employees who adopt wellness programs see considerable positive returns, even within the first few years after implementation (Baicker, et al, 2010).

Similarly, a study by Baker and associates (2008) examined the application of an econometric Return of Investment Model to estimate the financial impact of one year changes in health risks for individuals participating in the Healthyroads Obesity Management Program. Healthyroads is a health improvement and obesity reduction program developed to support individuals' attempts at losing weight, improving eating habits, and increasing their physical activity. The program provides telephonic counseling to participants and access to educational materials through a health improvement web site.

The Return of Investment Model was applied to this study to demonstrate how medical and productivity cost savings may be estimated by observing reductions in the health risks in an employed population. The study included 890 employees who participated in the yearlong risk reduction program. In year one, program participants experienced significant reductions in the seven risk factors of poor diet, inadequate

physical activity, high total cholesterol, high blood glucose, high blood pressure, high stress, and obesity. Alcohol consumption increased while no change was found in smoking and depression. Weight, BMI, and percent overweight or obese decreased significantly (Baicker, et al, 2010).

As estimated by the Return of Investment Model, these changes in the risk profile of participants resulted in reductions in health care expenditures and improved worker productivity. Fifty-nine percent of projected employer savings totaling $311,755 were related to reduction in health care spending. This represents a potential return of 17% over one year for the employers funding the program (Baker et el., 2008).

Worksite Health Promotion Participation Factors

Worksite health promotion participation factors include participation rates, incentives, and barriers.

Participation rates. One of the key motivations for implementing health promotion programs at the worksite is the potential to reach a high percentage of people and to modify the health of employees who would be unlikely to participate in preventive health behaviors. Worksite health promotion programs are only successful to the level of which both employers and employees participate. Therefore, programs are constantly exploring interventions to enhance participation (Glasgow, McKaul, & Fisher, 1993).

Although there have been reported benefits of health education interventions across various health issues, the key to program effectiveness is participation and retention. Unfortunately, not everyone is willing to participate in health interventions. In fact, health education interventions are vulnerable to low participation rates (Gucciardi, Cameron, Liao, Palmer, & Stewart, 2007).

Robroek, Van Lenthe, Van Empelen, and Burdorf (2009) reviewed studies that explored the characteristics of participants and non-participants in worksite health promotion programs aimed at physical activity and/or nutrition published from 1988 to 2007. In total, 23 studies were included with ten studies on educational or counseling programs, six fitness center interventions, and seven studies examining determinants of participation in multi-component programs.

These researchers found that participation levels in health promotion interventions at the workplace were typically below 50%. It was found that female workers had higher participation rates than men, with the exception of interventions consisting of fitness center programs, which was not observed. There also appeared to be a trend with higher participation among younger employees, and lowest participation level among the oldest age groups (Robroek, et al., 2009).

Five of the seven studies showed a higher participation level among married or cohabiting employees. Two out of the six studies that reported a higher participation level among Caucasian employees found a statistically significant difference in comparison with black or Hispanic employees (Robroek, et al., 2009).

Robroek and colleagues (2009) also noted differences with education and income levels. Four positive statistically significant associations were found for a higher education level, and one study reported a higher participation level for those with lower education level. One out of three studies showed a higher participation level among workers with a higher income.

The studies reviewed showed that programs that provide incentives, offer a multi-component strategy, and focus on multiple behaviors have a higher overall participation

level. It was suggested that it is important to tailor intervention programs to reach those who need it most, and to increase generalizability across all workers (Robroek, et al., 2009).

Participation incentives. Recently, employers are showing renewed interest in using rewards or incentives to increase health promotion participation rates. A 2004 National Worksite Health Promotion Survey indicated that 26% of employers use incentives to promote participation (Linnan et al., 2007).

In 1979, Johnson and Johnson Corporation introduced the Live for Life Wellness Programs to provide resources needed to create a healthier workforce. Until the company started offering employees financial incentives, only two of ten workers completed an annual health behavior survey. When Johnson and Johnson offered respondents a $500 rebate on health insurance premiums, survey participation among employers grew to 90%, and healthcare costs decreased (Kosa & Finkelstein, 2003).

A study by Taitel, Haufle, Heck, Loeppke, and Fetterolf (2008) investigated factors associated with employee participation rates in health risk assessments (HRA). The study analyzed data from 124 employers with 882,275 incentive eligible employees who completed 344,825 HRAs. Using monetary incentives, these employers experienced a range of participation rates, and they exhibited a variety of factors that impacted their workforce's participation. Generally, it was found that a higher dollar incentive value was associated with higher participation rates.

Specifically, the findings confirmed that incentive value and organizational commitment level were the strongest predictors of HRA completion. To achieve a 50% HRA completion rate, employers with a low organizational commitment level need an

incentive value of approximately $120 whereas employers with a high organizational commitment level only needed approximately $40. The study suggests that employers seeking to achieve high HRA participation rates need to consider both incentive value and organizational commitment level (Taitel et al., 2008).

Participation barriers. Many worksite health promotion program administrators struggle with low participation rates. Glasgow and associates (1993) reviewed available worksite studies that collected data on employee participation and found that on average only one-quarter to one-half of employees participated in health promotion programs offered in a given worksite. This average is particularly low considering that more than 81% of private worksites with 50 employees or more offer worksite health promotion programs (Anspaugh, Hunter, & Savage, 1996).

There are various reasons why people do not participate in worksite health promotion programs. For some people, it may be costs such as time and money, and other people may not perceive benefits to their health. In addition, some people may not feel susceptible to a disease or illness. These are just a few of the many reasons why people choose not to participate in worksite health promotion programs (Olson & Chaney, 2009).

A recent study by Person, Colby, Bulova, and Eubanks, (2010) was conducted to determine barriers in an employee wellness program, Wellness Wednesdays: “Eat & Meet” About Healthy Living. The program held weekly 30 minute classes on various nutrition and health related topics for 10 weeks. A knowledge check quiz was administered to participants at the end of each class to determine the effectiveness of the information and materials presented and participants’ level of knowledge on the topics. A

five dollar incentive was given to each participant for each class they attended. After the completion of the 10 week program, three to five minute qualitative interviews were conducted by the program organizer with 11 employees who attended the program and seven employees who did not attend the program. A total of 50 employees attended Wellness Wednesdays making the average participation rate less than 50%.

Barriers such as insufficient incentives, inconvenient locations, time limitations, not interested in topics presented, schedule, marketing, health beliefs, and not interested in the program were found to negatively impact the participation rates in the employee wellness program. The top three barriers were incentives, location and time. Suggestions were made to increase participation rates through creative approaches in order to meet the needs of employees such as by distributing a needs and interest survey to all employees to ensure topics are relevant and of interest for the intended audience (Person et al., 2010).

Health Behavior Theory and Worksite Health Promotion

The existing literature reviewed implies that theories can serve as an essential framework for the design and evaluation of health interventions. When addressing influences on the problem of low participation rates, theory is expected to guide efforts to increase participation and improve the impact of the next generation of applied worksite health promotion interventions (Linnan, Sorensen, Colditz, Klar, & Emmons, 2001).

There are many challenges and opportunities for influencing the public's health by improving participation in worksite health promotion at the employee and worksite levels. Using theory based approaches to understand the many determinants of participation is an important first step toward improving the public health impact of these

programs. When theory is used to discover the full range of possible determinants of participation, applied research and interventions can be developed to improve participation at the worksite and employee levels (Linnan et al., 2001).

Transtheoretical model. The transtheoretical model has been used to illustrate the stages individuals progress through in making a behavioral change. It is used to understand the cognitive and behavioral processes individuals use while changing health behaviors (Marcus, & Simkin, 1994).

The transtheoretical model depicts the time or readiness element into five progressive stages along which behavior change occurs. The stages in this theory, precontemplation, contemplation, preparation, action, and maintenance, do not always occur in a linear mode, but may also be cyclical as many individuals can make several attempts before their behavioral change is accomplished. The amount of progress people make as a result of intervention tends to be a function of the stage they are in at the start of the attempted behavior change (Marcus & Simkin, 1994).

The transtheoretical model presents a framework for both the conceptualization and measurement of behavior change, as well as facilitating promotion strategies that are individualized and easily adapted. Research has shown a relationship between the stage of change a person is in and the specific processes used in that stage (Marshall & Biddle, 2001).

In a meta-analytic study, Hall and Rossi (2008) examined 120 separate studies conducted between 1984 and 2003 that looked at the consistency of the transtheoretical model across 48 different health behaviors. The theoretical methods for behavior change outlined in the transtheoretical model were reported as extremely consistent regardless of

the range of behaviors and populations. The results implied a common pathway to behavior change which supports application of the transtheoretical model to multiple health behaviors among diverse populations.

Summary

This chapter reviewed workplace health expenditures, worksite health promotion, employee health and employer outcomes of worksite health promotion programs, and how the transtheoretical model theory relates to worksite health promotion programs. Worksite health promotion was presented as a way of improving the health behaviors of the workforce and financial circumstances of employers in the workplace. Literature concerning the benefits of current comprehensive worksite health promotion programs showed positive outcomes with improving health behaviors, employee productivity associated with presenteeism and absenteeism, and reducing health care related costs.

Literature supporting the benefits of worksite health promotion programs continues to grow; however, methods to improve participation have received limited research. Research in assessing employees' interests and perceived barriers to participation in worksite health promotion programs is also lacking. In order for worksite health promotion programs and services to be effective they need to be designed with consideration of the needs and interests of the participants.

Chapter Three: Research Methodology

Introduction

This chapter describes the research methods used to complete this study. It gives details concerning the subject selection, research design, instrumentation, and how the data were collected and analyzed.

Participant Selection

The target population for this study was defined as all wellness program eligible employees of Minnesota State University, Mankato (MSU,M). The ages of the population are those employees who are older than 18 years of age. Participants were recruited by email. All employees of Minnesota State University, Mankato are assigned a personal email account upon hire. Distribution of the questionnaire was done through the university's Information Technology (IT) Department. The IT Services staff assisted in the migration from the survey in its electronic form to an online format. They also assisted with deploying the survey by providing list of email addresses of all current MSU,M employees. All employees were invited to participate in the research.

Participants were recruited by an email (Appendix A) that contained an informed consent (Appendix B) explaining the objectives and risks of the research, as well as secure access to the questionnaire (Appendix C). Participants were assured that their participation was voluntary and confidential.

Research Design

The questionnaire was constructed using an online survey resource at surveymonkey.com. Distribution of the questionnaire was done through the university's

IT Services Department. The IT Services staff converted the survey to an online format and included a web link to the survey in the email. Each employee received an email that included an introduction and instructions for completion of the questionnaire, as well as electronic access to the questionnaire and its informed consent. By completing the questionnaire, participants consented to the terms describe in the email and informed consent.

Instrumentation

Data for this study were gathered using an electronic questionnaire. The purpose of the questionnaire was to obtain employee input regarding their barriers and incentives to participation in the university's worksite wellness programs.

The questionnaire used is a modified version from the 2004 Porter Novelli HealthStyles Questionnaire, using questions 52-56. (Appendix D). Demographic questions regarding age, gender, ethnicity, and employee job position were added to the questionnaire. Copyright permission to use the survey was obtained.

Data Collection

The survey link was open for 12 days from February 25th, 2013 to March 8th, 2013. The initial email was sent out on February 25th inviting participants to take the survey and a reminder email was sent out March 4th reminding participants to take the survey. During this timeframe eligible participates were able to access the link to complete the survey one time. Participants were involved in the research at only one point in time, when they were filling out and completing their survey.

Participants were instructed to read the letter of consent, introduction to the research and survey, and then complete the survey to the best of their ability. Upon

completion of the questionnaire, participants' responses were instantaneously accumulated in an electronic database. Privacy of responses was protected by granting access to the database only to the primary investigator and student co-investigator of the research. International Review Board (IRB) approval was obtained (Appendix E).

Pilot Test

A pilot test was conducted to identify any issues regarding the questionnaire's phrasing and wording and to determine the approximate time needed to complete the questionnaire. Five health care professionals were selected to complete the pilot test of the questionnaire. They received an introduction to the questionnaire, along with its letter of consent. Time needed to complete the survey was between three and five minutes. No suggestions or feedback was made regarding the comprehensiveness and concerns of the questionnaire.

Data Processing and Analysis

Responses to the questionnaire were put into an electronic database and submitted to Statistical Package for Social Sciences (SPSS) for analysis. Percentages of each survey question were calculated using frequency counts.

Summary

This chapter gave detail of the methods used to complete this study. It described the participant selection, research design, instrumentation, and data collection. This chapter also gave details to the pilot testing and data processing and analysis.

Chapter Four: Findings

Introduction

This chapter presents the findings of employee responses to the questionnaire used in this study. Specifically, this chapter reports the demographics of the study participants, as well as their responses to questions about selected barriers to participation in worksite health promotion programs, selected incentives to participation in worksite health promotion programs, preferred types of worksite wellness programs, and worksite wellness programs that participants would most likely use.

Demographic Characteristics

The demographic characteristics of the persons participating in this study are presented in Table 4.1. Of the employees who were emailed the survey (n=1,596), 437 employees returned the survey for a response rate of 27.4%. There were more female participants (n= 308, 71.3%) than male participants (n= 124, 28.7%). The mean age of the participants was 46.13 years (standard deviation (SD) = 11.55). Forty-five percent were staff, 38% were faculty, 10.5% were adjunct faculty and 6.4% were administrators.

Table 4.1

Demographic Characteristics of the Sample

Characteristic	*n*	%	*M (SD)*
Gender	Total = 432		
Male	124	28.7	
Female	308	71.3	
Age (years)	Total = 416		46.13 (11.55)
18-24	6	1.4	
24-34	67	16.1	
35-44	99	23.8	
45-54	112	26.9	
55-64	115	27.8	
65+	17	4.0	
Ethnicity	Total = 432		
Caucasian	417	96.5	
African American	6	1.4	
Hispanic	3	.7	
Native American	1	.2	
Asian American	5	1.2	
Job Position	Total = 437		
Faculty	166	38.0	
Staff	197	45.1	
Adjunct Faculty	46	10.5	
Administrator	28	6.4	

Wellness Programs that Employees Would Most Likely Use

The types of worksite wellness programs that respondents were most likely to use are presented in Table 4.2. Respondents reported they would be very likely to use paid time to exercise at work (71.8%), followed by a fitness center (53%), health screening tests (46.6%), healthy food choices in vending machines and cafeterias (45.6%), weight loss programs (31.4%), and confidential stress/depression screening and management (21.7%).

Table 4.2

Types of Programs that Employee Would Most Likely Use

Type of Program	*% (n)*			
	Not at all Likely	**Not Very Likely**	**Somewhat Likely**	**Very Likely**
Fitness center	6.9% (30)	13.0% (56)	27.1% (117)	53% (229)
Healthy food choices in vending machines and cafeteria	6.7% (29)	13.0% (56)	34.7% (149)	45.6% (196)
Health screening tests	6.7% (29)	16.5% (71)	30.2% (130)	46.6% (201)
Paid time to exercise at work	4.9% (21)	7.2% (31)	16.2% (70)	71.8% (310)
Confidential stress/depression screening and management	14.5% (62)	31% (133)	32.9% (141)	21.7% (93)
Weight loss program	12.6% (54)	22.1% (95)	34.0% (146)	31.4% (135)

Wellness Programs Preferred by Employees

The types of worksite wellness programs that respondents prefer are presented in Table 4.3. The frequently reported preferred program was personalized diet or exercise counseling (58.5%), followed by on-site exercise classes (56.9%), healthy eating or health cooking classes (48.6%), online tools (45%), weight loss support group (25.7), and sports leagues (19.7%).

Table 4.3

Types of Wellness Programs Preferred

Characteristic	*n*	%
Personalized diet or exercise counseling	255	58.5
On-site exercise classes	248	56.9
Healthy eating or healthy cooking classes	212	48.6
Online tools	196	45.0
Weight loss support group	112	25.7
Sports leagues	86	19.7

Selected Barriers to Worksite Health Promotion Programs

Table 4.4 presents the barriers to worksite health promotion programs identified by respondents. The most commonly reported barriers to using worksite health promotion programs were no time during the work day (67%), followed by no time before or after work (51.1%), already involved in other programs (17%), too tired (13.1%), don't want to do this with co-workers (9.6%), and no interest (6%).

Table 4.4

Perceived Barriers to Worksite Wellness Programs

Characteristic	*n*	%
No time during the work day	292	67.0
No time before or after work	223	51.1
Already involved in other programs	74	17.0
Too tired	57	13.1
Don't want to do this with co-workers	42	9.6
No interest	26	6.0

Selected Incentives to Worksite Health Promotion Programs

The respondents report of selected incentives to participate in worksite health promotion programs are presented in Table 4.5. The most commonly reported incentives for utilizing employee wellness services were having programs held at a convenient time (81.7%), convenient location (78.3%), employer gave paid time off to go (70.6%), employer encouraged me to go (30.7%), I could invite family/friends (29.1%), and my co-workers joined in (20.4%).

Table 4.5

Perceived Incentives to Worksite Wellness Programs

Characteristic	*n*	%
Convenient time	356	81.7
Convenient location	342	78.3
Employer gave me paid time off to go	308	70.6
Employer encouraged me to go	134	30.7
My co-workers joined in	89	20.4
I could invite family/friends	127	29.1

Responses to 'Other' Option

Table 4.6 provides a categorization of responses to the 'other' option in the survey. Participant responses have been categorized into the following themes: distance, on campus exercise/classes, barriers to participation, and incentives to participation. Participants identified incentives as important factors in their decisions to participate in wellness programs. Participants specifically identified the desire for day care centers, free or discounted gym memberships, and convenient classes. Participants also listed specific barrier to participation in worksite wellness programs such as long commutes, working off site from main campus, and not wanting to exercise with students.

Table 4.6

Categorization of Responses to 'Other' Option (Questions 5-8)

Categories	Participant Responses
Distance	Not on Campus therefore most do not apply.
	I live 30 miles from campus and am only adjunct. Site is 7700 France Ave. S. Programs are difficult due to schedules.
	I live 30 miles from campus, am seldom there and only adjunct. Hot Yoga-Twin Cities Studio (I commute).
	Currently live a distance away from Mankato (1hr.15.min).
	Note: I live in Le Sueur so I work out there regularly.
	I live in the Twin Cities and meet these needs there.
	Do not wish to work out in the middle of work day or give up my lunch to do so.
	As adjunct faculty, I am not on campus very much so this would limit how much I would be involved in the program. I work 4 days a week in private practice.
	I live in the Twin Cities. It would be silly to drive 77 miles each way to exercise. I'm an adjunct online so don't come to campus. Live in the Twin Cities.

	I commute 1.5 hours to work, 1.5 hours back - time is short.
	Teach online. Am not on campus and do not live in Mankato.
	I teach all of my courses online, so I'm not on campus much.
	Seldom on campus - live 30 miles away.
	Teach at 7700 France, live in Minneapolis.
	Workplace arranges off-site locations. I live in the northern Twin Cities, and cannot easily get to campus more than 2 or 3 times a week. An agreement with a larger facility, like Lifetime Fitness or similar, would be VERY beneficial - I would use that just about every day. More locations and easier access.
	A free gym membership would be lovely!!
	Hauling workout gear to university along with the rest of work stuff (laptop, papers, etc.).
	Teach on line, not on campus
	I commute from Le Sueur so I have little time after work.
On Campus Exercise/Classes	Massage therapy available onsite to relieve stress, relieve back pain from sitting at the computer all day and boost immunity.
	Weight watchers at work...
	Reduced fee at YMCA/health club
	Gym in #1 as a personal space for faculty outside of student use (i.e., "faculty gym")
	Love the free workout - please make that happen!
	I find the idea of being paid to exercise to be over the top. It is a persons personal responsibility!
	FREE or significant discount massage
	On campus massage, and I would pay
	Lap pool with accessible hours (NOT 7PM or noon or 9PM) maybe 4:30pm - 7:00
	Treadmill desk
	Discount at local gyms for family
	Pool access as part of wellness program
	Massage
	Meditation coaching
	Nutrition consultations
	I miss the 12 noon zumba class
	Water aerobics
	On-site yoga -- I did it some but taking time at school to do yoga meant I had to take more work home to do at home.

	On site gym facilities
	Tai chi, yoga, stress reduction techniques
	None
	Couch to 5 K walking program with campus maps showing distance from pt A to B, laps around campus, labs around field house, etc.
	Weight Watchers (specific weight loss support group)
	Time/relaxation (ie: Yoga)
	Online wellness education courses; health journaling
	Running club
	Exercise videos (like zumba, yoga) that we could do at home
	Weight Watchers
	Personal trainer
	Option to get a standing desk?
	Gym for weights and cardio
	Different offerings, more sport related
	I'm adjunct and rarely on campus.
	If it involved a non-competitive biking component
	Money toward an off-site gym (maybe through insurance plan-we are missing this in our insurance offerings)
	Lap pool available at reasonable times - late afternoon early evening
	Again - noon Zumba class :)
Barriers to Participation	My job takes my time at work.
	Scheduling that allows for constancy
	Live out of town
	Just lazy..
	Scheduling conflicts
	If I take time to exercise during the day at work, I have to take more work home to do at home.
	Kind of a pain to haul stuff around to shower, etc....
	Don't like going to the gym because of lack of parking
	Current schedule
	Don't want to pay for another gym membership
	Busy w/FT work & coursework in addition
	Health reasons
	Have something separate from students
	Low cost and convenience to do during a lunch break.
	Easy of program, jumping through hoops, or timing of events
	I prefer to focus on my job during the work day and do whatever wellness activities I choose to do on my own time.
	I have planter fasciitis hard to do things

Unpredictable schedule makes consistent attendance hard
Student interns as providers of services
My experience has been that coaching type programs and informational programs are not effective
My children...
Supervisor will not allow flexibility for these activities
Childcare--I'm either working or taking care of my kids
Co-workers bothers me less than workouts with students.
Insufficient faculty locker room option. Too small and far away from Otto and I do NOT want to share locker room space with students.
Parking I work on other side of campus. Fine in summer for fall but harder in winter and spring to get across campus.
An hour drive from my home to MSU
1) Don't want to do this with my students. 2) I commute and belong to the Y in my town
Workplace Wellness' just seem so condescending and patronizing. It's like my 'employer' is saying 'You're fat. You MUST fix this.'
It isn't part of my "habit" yet.
Don't like to get sweaty in the middle of the day.
Go for hikes after work with wife and dog
Like to keep a healthy boundary b/w work and personal life
Many of the programs are always held same time/day and don’t accommodate for faculty who have commitments during the noon hour
Lack of motivation
The fact that we have to PAY to use the MNSU facilities. Seems ridiculous that I would have to pay $75 a semester to use the weight room, treadmills etc, in a place that I WORK. Why do Faculty/staff have to pay to use these?
Don't like getting sweaty during the work day
I am officed at 7700 in Edina; MSU does not offer us anything there--wellness programs or otherwise.
Don't want to do this with/in front of students
No child care available before or after work hours,
Don't want to be sweaty at work.
KIDS. They are the biggest factor. I have three young children and time spent exercising at work is time away from them. I jump on the treadmill late at night, when I can squeeze it in.
2 hour drive to Mankato and I usually telecommute or go to Edina Campus for work

	Don't want to do these with students
	Would depend on the activity
	During the lunch hour, it's hard to get the workout in, then get cleaned up and not stink for the rest of the work day!
	No time after work, because of car pool/sharing rides.
	Don't want to so this with students
	Dependent upon time.
	Employer wouldn't have to pay me but offer it for free. I wish our fitness center here would be free to employees or offer a punch card instead of having to pay a large amount up front per semester
	Programs not taught by students
Incentives to Participation	Organizing of groups and teams was already done so easy to join
	Class that works in my teaching schedule; prefer after classes are done
	"Paid the off" is not relevant to salaried jobs like faculty -- we still have to do all of our work.
	Towel service for showering after
	Some type of child care if it is in the off hours
	Part-time employee - perhaps free at home exercise program
	None
	Don’t want to do exercises with students
	Not so much paid time off as the option to go if the class extended beyond the 30 minute lunch period we are currently allotted
	Employer encourages talking walking meetings or provides stand-up desk
	Child care available for after-work day
	Childcare available (I'd pay for it, just have to have it)
	Would be great if spouse could participate too
	convenient time for me is before work which is when I work out now
	If there was childcare, so my young children could be taken care of while I work out.
	Taxpayers should not pay time for what people should do on their own!
	Probably the only wellness activity I would participate in at this time would be something that would involve my kids.
	Free Access to the program. Right now the programs are great but the cost in time AND money is to prohibitive.

	Most exercise classes are offered before 5 pm, and I work until 5 so I cannot participate.
	Cologne and Lysol-free exercise space due to allergies.
	different activity
	Have separate facilities for staff/faculty
	Free/reasonably priced babysitting/kids programs for ages 3-5+
	Being able to invite non-MSU staff would be great!
	None I work out off site - wish my participation at the Y would be covered though
	Health care plan coverage of gym membership to a gym of my choosing.

Summary

This chapter presented the findings of this study. It reported demographic characteristics of the subjects, wellness programs that employees would most likely use, wellness programs preferred by employees, selected barriers to worksite wellness programs, and selected incentives to worksite wellness programs.

Chapter Five: Conclusions and Recommendations

Introduction

The findings from this study present several opportunities to further explore best practices of health promotion among the university's workplace wellness programs. By combining knowledge of participant preferences for incentives and perceived barriers it may be possible to construct health initiatives that are innovative, appealing, and draw on the preferences and interpersonal interactions of University employees.

Conclusions

The findings of this study suggest that 71.8% of employees who answered the survey perceived they would use paid time off to engage in physical activity. A fitness center would reportedly be used by 53% of employees and 46.6% of employees would attend health screenings. Personalized diet or exercise counseling was the most preferred program stated by respondents (58.5%). The most commonly reported barriers to using wellness services were no time during the work day (67%), followed by no time before or after work (51.1%). About eight one percent of employees that answered the survey stated they would utilize worksite wellness programs if they were held at a convenient time.

Recommendations

This section gives recommendation to research and practice based on the survey results.

Research. Although the majority of respondents selected paid time off to attend wellness services, allowing for this type of an initiative may not be feasible for an

employer. Additional research regarding the ROI of this specific initiative, as well as whether or not respondents who say they would participate in this type of program actually participate needs to be evaluated. There are possible benefits of programs that allow for paid time off work to attend. These could include improvements in an increase in overall health, attracting and retaining employees, increased morale, and increasing employee productivity. These benefits are anticipated to compensate for the employer paid hours away from work in order to participate in wellness programs. Paid time off work to join programs may also encourage employees to overcome certain perceived barriers, such as no time during the workday, which was the most frequently reported perceived barrier (67%) in this study.

Study respondents identified incentives as important factors in their decisions to participate in the wellness programs. As indicated earlier by Taitel and colleagues (2008), employers seeking to achieve high participation rates need to consider the incentive value. Further research is needed on incentives to measure the most effective type for increasing employee participation as well as their long term success on participation. Within the University, a future research project could survey employees on a variety of known incentive types, frequency, and employee expectations about rewards in general, to develop a more evidence based incentive strategy within the university.

This study tried to describe perceived barriers and incentives to participation in worksite health promotion programs. There are limited published data on the perceived needs of employees. The findings of this study were surveyed from a non-random sample from a large organization therefore; generalizations to other settings and worksites should be made with caution. More research is needed to determine the perceived needs of

employees. Longitudinal studies need to be done in order to determine if offering employees paid time off work to participate in worksite health promotion programs is effective. Employee changes in health care costs, work productivity, absenteeism, and other behaviors associated with individual health need to be determined and followed. It needs to be explored if giving employees paid time off work to attend worksite wellness programs, the savings accredited to attending these programs at work are greater than the costs of allowing the paid time off work to do so. Since lack of time was the leading reported barrier to worksite health promotion program participation in this study, examining the feasibility of offering paid time off work to exercise may be the most valuable next step to take in improving participation.

Practice. Over half of respondents stated that they would prefer personalized diet or exercise counseling (58.5%). One suggestion to the university would be to provide onsite health educators such as health coaches, dieticians, and personal trainers to provide tailored plan to individuals. Health educators can provide a service of accountability and help employees overcome certain barriers, such as time implications. Health educators can work with employees to make small improvements to meet an ultimate health goal.

Participants identified incentives as important factors in their decisions to participate in wellness programs. Participants specifically identified the desire for day care centers, free or discounted gym memberships, and convenient classes. The university could try to work around busy schedules by providing programs during the slower times of the day or semester. The university could also provide programs that involve spouses and children to help encourage a family friendly perspective. This may help those

overcome the barrier of not having child care, as mentioned by participants in the 'other' section.

Summary

In summary, this study provided an exploration into employee preferences regarding health promotion participation and barriers in worksite wellness programs. A well-designed workplace health promotion initiative depends on offering a wellness program that is appealing and tailored to employee needs. Workplace wellness promotion is complex but when done well it can ultimately improve organizational and individual health and wellbeing and save money.

References

Ammendolia, C., Cancelliere, C., Cassidy, J. D., & Cote, P. (2011). Are workplace health promotion programs effective at improving presenteeism in workers?: A systematic review and best evidence synthesis of the literature. *BioMed Central Public Health, 11,* 395.

Anspaugh, D., Hunter, S., & Savage, P. (1996). Enhancing employee participation in corporate health promotion programs. *American Journal of Health Behavior, 20*, 112.

Baicker, K., Cutler, D., & Song, Z. (2010). Workplace wellness programs can generate savings. *Health Affairs, 29*, 304-311.

Baker, K. M., Bowen, J., Goetzel, R. Z., Metz, R. D., Nelson, C. F., Pei, X., . . . Weiss, A. J. (2008). Using return on investment estimation model to evaluate outcomes from an obesity management worksite health promotion program. *Journal of Occupational Environmental Medicine, 50*, 981-989.

Booyens, S. W. (1998). *Dimension of nursing management*. Lansdowne: Juta & Co, Ltd.

Bureau of Labor Statistics. (2005). *Current population survey; Circadian information, shift work practices*. Washington, DC: United States Department of Labor.

Carls, G. S., Goetzel, R. Z., Henke, R. M., Moley, S., Pei, X., Short, M. E., . . . Wang, S. (2007). The relationship between health risks and health and productivity costs among employees at Pepsi Bottling Group. *Journal of Occupational and Environmental Medicine, 52,* 519-527.

Chapman, L. S. (2005). Meta-evaluation of worksite health promotion economic return studies: 2005 update. *American Journal of Health Promotion*, *19*, 1-11.

Chenoweth, D. H. (2011). *Worksite health promotion* (3rd ed.). Chicago, IL: Human Kinetics

Cox, C. (2003). *ACSM's worksite health promotion manual: A guide to building and sustaining healthy worksites.* Champaign, IL: Human Kinetics.

Finkelstein, E. A., DiBonaventura, M., Burgess, S. M., & Hale, B. C. (2010). The costs of obesity in the workplace. *Journal of Occupational and Environmental Medicine, 52*, 971-976.

French, R. (2011). *Organizational behaviour*. Chichester, West Sussex: John Wiley & Sons, Inc.

Glanz, K., Rimer, B.K., & Viswanath, K. (2008). *Health behavior and health education: Theory, research, and practice*. San Francisco, CA: Jossey-Bass.

Glasgow, R., McKaul, K., & Fisher, J. (1993). Participation in worksite health promotion: A critique of the literature and recommendations for future practice. *Health Education Quarterly, 20*, 391-408

Goetzel, R., Guindon, A., Turshen, J., & Ozminkowski R. (2001). Health and productivity management: Establishing key performance measures, benchmarks, and best practices. *Journal of Occupational and Environmental Medicine, 45,* 5-14.

Goetzel, R. Z., Hawkins K., Ozminkowski R. J., & Wang S. (2003). The health and productivity cost burden of the ‘top 10” physical and mental health conditions

affecting six large U.S. employers in 1999. *Journal of Occupational Environmental Medicine, 45,* 4-14.

Goetzel, R. Z., & Ozminkowski R. J. (2008). The health cost benefits of worksite health promotion programs. *Annual Review of Public Health, 29,* 303-323.

Gucciardi, E., Cameron, J.I., Liao, C.D., Palmer, A., & Stewart, D.E. (2007). Program design features that can improve participation in health education interventions. *BioMedCentral Medical Research Methodology, 7*, 47.

Hall, K. L., & Rossi, J. S. (2008). Meta-analytic examination of the strong and weak principles across 48 health behaviors. *Preventive Medicine, 46*, 266–274.

Kessler, R. C., Greenberg, P. E., Mickelson, K. D., Meneades, L. M., & Wang, P. S. (2001). The effects of chronic conditions on work loss and work cutback. *Journal of Occupational and Environmental Medicine, 43,* 218-225.

Kosa, K. M., & Finkelstein, E. A. (2003). Use of incentives to motivate healthy behaviors among employees. *Gender Issues, 21*, 50-59.

Kumpfer, K. L., Merrill, R. M., & Neville, B. H. (2010). Longitudinal outcomes of a comprehensive, incentivized worksite wellness program. *Evaluation and the Health Professions, 34*, 103-123.

Linnan, L., Bowling, M., Childress, J., Lindsay, G., Blakey, C., Pronk, S., . . . Royall, P. (2007). Results of the 2004 national worksite health promotion survey. *American Journal of Public Health, 98,* 1-7.

Linnan, L. A., Sorensen, G., Colditz, G., Klar, D. N., & Emmons, K. M. (2001). Using theory to understand the multiple determinants of low participation in worksite health promotion programs. *Health Education Behavior, 28*, 591-607.

Marcus, B. H., & Simkin, L. R. (1994). The transtheoretical model: Applications to exercise behavior. *Medicine Science in Sports Exercise, 26*, 1400-1404.

Marshall, S. J., & Biddle, S. J., (2001). The transtheoretical model of behavior change: A meta-analysis of applications to physical activity and exercise. *Annals of Behavioral Medicine, 23*, 229–246.

O'Donnell, M. P. (2002). *Health promotion in the workplace.* Albany, NY: Delmar Thomson Learning Inc.

Ojugo, C. (2009). *Practical food & beverage cost control*. Clifton Park, NY: Delmar.

Olson, A., & Chaney J. D. (2009). Overcoming barriers to employee participation in worksite health promotion programs. *American Journal of Health Studies, 24*, 353-357.

Person, A. L., Colby, S. E., Bulova, J. A., & Eubanks, L. W. (2010). Barriers to participation in a worksite wellness program. *Nutrition Research Reviews, 4*, 149-154.

Prochaska, J. O., & Velicer W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion, 1*, 38-48.

Riedel, J. E., Lynch, W., Basse, C., Hymel, P, & Peterson, K. W. (2001). The effect of disease prevention and health promotion on workplace productivity: A literature review. *American Journal of Health Behavior*, *15*, 167-191.

Robroek, S. W., Van Lenthe, J. F., Van Empelen, P., & Burdorf A. (2009). Determinants of participation in worksite health promotion programmes: A systematic review. *International Journal of Behavioural Nutrition and Physical Activity, 6*, 1-12.

Taitel, M. S., Haufle, V., Heck, D., Loeppke, R., & Fetterolf, D. (2008). Incentives and other factors associated with employee participation in health risk assessments. *Journal of Occupational and Environmental Medicine, 50*, 863-872.

United States Department of Health and Human Services. (2012, September 20). *About healthy people*. Retrieved from http://www.healthypeople.gov/2020/about/default.aspx

United States Department of Health and Human Services. (2012, October 30). *Educational and community-based programs*. Retrieved from http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=11

Appendices

Appendix A.

Invitation Email with Informed Consent

You are requested to participate in research supervised by Dr. Judith Luebke on exploring perspectives of barriers and incentives to employees' participation in worksite wellness programs. This survey should take about 3 to 5 minutes to complete. The goal of this survey is to identify what influences employees' decisions regarding participation in worksite wellness programs, and you will be asked to answer questions about that topic. If you have any questions about the research, please contact Dr. Luebke at judith.luebke@mnsu.edu.

Participation is voluntary. You have the option not to respond to any of the questions. You may stop taking the survey at any time by closing your web browser. Participation or nonparticipation will not impact your relationship with Minnesota State University, Mankato. If you have questions about the treatment of human participants and Minnesota State University, Mankato, contact the IRB administrator, Dean Barry Ries, at 507-389-2321 or barry.ries@mnsu.edu.

Responses will be anonymous. However, whenever one works with online technology there is always the risk of compromising privacy, confidentiality, and/or anonymity. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

The risks of participating are no more than are experienced in daily life.

There are no direct benefits for participating. Society might benefit by the increased understanding of perspectives of barriers and incentives to employees' participation in worksite health promotion programs.

Submitting the completed survey will indicate your informed consent to participate and indicate your assurance that you are at least 18 years of age.

Please print a copy of this page for your future reference.

MSU IRBNet ID# 426511

Date of MSU IRB approval: February 18th, 2013

Thank you very much for your time and support. Please start with the survey now by clinking on the link below.

(Survey link here)

Appendix B.

Questionnaire

1. What is your age? (years)

2. What is your gender?

- Male
- Female

3. Please specify your ethnicity:

- Caucasian (non- Hispanic)
- Hispanic or Latino
- Black or African American (non-Hispanic)
- Native American or American Indian
- Asian / Pacific Islander

Other (please specify)

4. What position do you hold at Minnesota State University, Mankato?

- Faculty
- Staff
- Adjunct Faculty
- Administrator

Other (please specify)

5. If your employer offered the following benefits as part of your job, how likely would you be to use them?

	NOT AT ALL LIKELY	NOT VERY LIKELY	SOMEWHAT LIKELY	VERY LIKELY
Fitness center (gym)				
Healthy food choices in vending machines and cafeteria				
Health screening tests (such as cholesterol, cancer, blood pressure)				
Paid time to exercise at work				
Confidential stress/depression screening and management				
Weight loss program				

Other (please specify)

6. If your employer offered free work wellness programs, which of the following elements, if any, would you be likely to use? (SELECT ALL THAT APPLY)

- ☐ Online tools for tracking food and exercise
- ☐ On-site exercise classes (such as aerobics, dance)
- ☐ Personalized diet or exercise counseling
- ☐ Healthy eating or healthy cooking classes
- ☐ Sports leagues (such as softball, basketball
- ☐ Weight loss support group

Other (please specify)

7. Which, if any, of the following reasons would keep you from participating in a free work wellness program? (SELECT ALL THAT APPLY)

- ☐ Too tired
- ☐ No interest
- ☐ No time during the work day
- ☐ No time before or after work
- ☐ Already involved in other programs
- ☐ Don't want to do this with co-workers

Other (please specify)

8. Which, if any, of the following would make you interested in participating in a free work wellness program? (SELECT ALL THAT APPLY)

- ☐ Employer encouraged me to go
- ☐ Employer gave paid time off to go
- ☐ Convenient time
- ☐ Convenient location
- ☐ My co-workers joined in
- ☐ I could invite family/friends

Other (please specify)

Done

Appendix C.

Adapted Questions from Porter Novelli HealthStyles Questionnaire

Porter Novelli: Styles 2004

52. Are you currently working full- or part-time outside of your home?

No..... b1 ➔ **PLEASE SKIP TO Q.X**

Yes.... b2 ➔ **PLEASE ANSWER THE QUESTIONS IN THE BOX BELOW**

53. If your employer offered the following benefits as part of your job, how likely would you be to use them? (CIRCLE ONE NUMBER FOR EACH)

	NOT AT ALL LIKELY	NOT VERY LIKELY	SOMEWHAT LIKELY	VERY LIKELY
Fitness center (gym)	1	2	3	4
Healthy food choices in vending machines and cafeteria	1	2	3	4
Health screening tests (e.g cholesterol, cancer, blood pressure)	1	2	3	4
Paid time to exercise at work	1	2	3	4
Confidential stress/depression screening and management	1	2	3	4
Weight loss program	1	2	3	4

54. If your employer offered free work wellness programs, which of the following elements, if any, would you be likely to use? ("X" ALL THAT APPLY)

Online tools for tracking food and exercise.....	b1	Healthy eating or healthy cooking classes	b4
On-site exercise classes (e.g. aerobics, dance)	b2	Sports leagues (e.g., softball, basketball)	b5
Personalized diet or exercise counseling	b3	Weight loss support group.....	b6

55. Which, if any, of the following reasons would keep you from participating in a free work wellness program? ("X" ALL THAT APPLY)

Too tired	b1	No time during the work day	b3	Already involved in other programs	b5
No interest	b2	No time before or after work.....	b4	Don't want to do this with co-workers	b6

56. Which, if any, of the following would make you interested in participating in a free work wellness program? ("X" ALL THAT APPLY)

Employer encouraged me to go	b2	Convenient time.....	b4	My co-workers joined in	b6
Employer gave paid time off to go	b1	Convenient location	b3	I could invite family/friends	b5

Appendix D.

IRB Approval Letter

MINNESOTA STATE UNIVERSITY
MANKATO

February
18, 2013

Dear Judith Luebke:

Re: IRB Proposal entitled "[426511-2] Health Promotion in the Workplace: Exploring Perspectives of Barriers and Incentives to Employees Participation"
Review Level: Level *[I]*

Your IRB Proposal has been approved as of February 18, 2013. On behalf of the Minnesota State University, Mankato IRB, I wish you success with your study. Remember that you must seek approval for any changes in your study, its design, funding source, consent process, or any part of the study that may affect participants in the study. Should any of the participants in your study suffer a research-related injury or other harmful outcome, you are required to report them to the IRB as soon as possible.

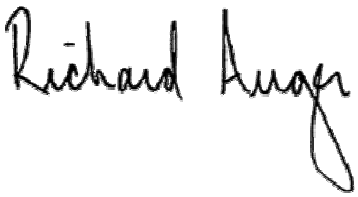
When you complete your data collection or should you discontinue your study, you must notify the IRB. Please include your log number with any correspondence with the IRB.

This approval is considered final when the full IRB approves the monthly decisions and active log. The IRB reserves the right to review each study as part of its continuing review process. Continuing
reviews are usually scheduled. However, under some conditions the IRB may choose not to announce a continuing review. If you have any questions, feel free to contact me at irb@mnsu.edu or 507-389-5102.

Cordially,

Mary Hadley, Ph.D.
IRB Coordinator

Sarah Sifers, Ph.D.
IRB Co-Chair



Richard Auger, Ph.D.
IRB Co-Chair

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Minnesota State University, Mankato IRB's records.