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Sandra Bromley

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Incentive-use in Worksite Wellness Programs in MN Government Agencies

By

Sandra Bromley

A Thesis Submitted in Partial Fulfillment of the

Requirements for the Degree of

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In

Community Health Education

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Incentive-use in Worksite Wellness Programs in MN Government Agencies

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Abstract

We used a digital email-based survey to collect information on WWP in government agencies in Minnesota. In terms of associations between incentive-use and success rates, results were inconclusive. Due to limitations in responses on the survey we are unable to draw a correlation between incentive-use and cost savings outcomes for agencies surveyed.

Survey results did provide other information that can be useful by health educators to improve and grow WWP. Results showed that compared to national rates, government agencies in Minnesota may not be utilizing additional funding resources for WWP. Future research on the use of grant and insurance company funding programs for WWP could be beneficial.

Information regarding barriers to program success and reasons agencies in Minnesota do not have programs was uncovered in survey results. Some of these barriers include laws and policies at the state level that may inhibit incentive-use in programs. This information can be used to improve current programming as well as a resource for starting new programs.

Strengths in the research can be found in the information surrounding evaluation tactics used by agencies in Minnesota currently to determine program use and success. Also, Disease Management programs were reported to be utilized the least across government agencies in Minnesota. Information regarding types of programs offered at each level of government can be beneficial to agencies looking to start or expand a WWP.

In conclusion, while results may not have provided conclusive results to confidently associate incentive-use with WWP success and cost savings outcomes, a great deal of information was uncovered that can help Minnesota agencies with WWP. This research creates many future opportunities to look further into variables that can have an impact on success in WWP as well as factors that contribute to cost savings outcomes for agencies offering WWP. The results of this research show the many opportunities to expand on the topic as to continue growth and potential success in WWP.

Chapter 1

Introduction

Worksite Wellness Programs (WWP) create opportunities for people to address chronic and non-chronic health conditions while at work (Almeida et al., 2015). These types of programs can address health issues related to smoking, physical activity, diet, mental health and stress management.

Agencies and companies offer many different types of WWP with differing program focuses. There are varying types of interventions used at different levels of government (Jia et al., 2018). There are also differences in how WWP are offered, budgeted and measured for success. Discrepancies in WWP could be related to the size of the agency offering the program (Schwatka et al., 2018).

The history of WWP research has focused on whether programs are successful or impactful, as well as existing barriers to employee participation (Batorsky, Lui, & Van Stolk, 2016). Some WWP are not successful and research is necessary to determine what fuels success. While participation rates are common as a short-term goal for programs, these rates do not provide information about long-term adherence and success. Some agencies look for reduced insurance costs, while others look for increased employee morale and retention rates of employees (Madison, 2016). These measures are considerably incomplete, as agencies should clearly outline what outcomes they are expecting to get and if they are willing to offer the budget necessary to see such outcomes.

Factors Influencing Program Success

financial gains for employers.

An initial selling point for WWP is the possibility of reduced insurance costs by employers toward employee medical expenses. One factor that contributes to the success of a program is whether employers struggle to find a financial gain in terms of health care costs in a timely manner. Expectations by employers and stakeholders are to see decreased insurance costs, however, it often takes time for health status and medical condition changes to reflect in insurance costs (Mattke et al., 2015). Depending on the health goals of the program, program coordinators may be promoting employees going to the doctor and using available preventative healthcare. This focus may initially increase insurance costs, however, studies show long term cost savings. "Economic evaluations (return on investment [ROI]) of well-designed, employer-based health management programs have indicated health care expenditure savings generally within 2 to 3 years of program initiation, in addition to longer range savings in subsequent years" (Musich, 2016 p. 389). However, companies should have the expectation that long-term increases in employee morale and mental health will result in less missed days of work and longer retention rates for employees (Mattke et al., 2015).

employee benefits of WWP.

WWP have the potential to bring health advocacy into the workplace and can provide time for employees to address and potentially offer equipment that can make employee work more health conscious (Schwatka et al., 2018). A research study on government agencies shows a decrease in smoking related health issues and inactivity issues, as well as an increase in feelings of appreciation and social support at work (Jia et al., 2018). All of these positive gains contribute to better mental health in those employees. Health issues vary among Government

Agencies so the focus health issues among each program may differ as well. Without WWP there is a possibility some of these important health changes may not happen.

Incentive-use in WWP

Incentives are another important factor to consider in regards to employee participation. Research has observed less weight loss in employees who participated in a non-incentivized program versus greater amounts of weight loss by employees in the incentivized program (Lahiri & Faghri, 2012). In WWP, the success rates of non-incentivized programs have shown to be lower than incentivized programs. “Employers with comprehensive incentivized programs reported the highest participation rate (59 percent)” (Mattke et al., 2015, p. 70).

Incentives are introduced to WWP in the form of monetary compensation upon completion, penalties in regards to health insurance costs and discounts to gyms or on wellness products (Batorsky, Taylor, Huang, Liu, Mattke, 2016). Batorsky and colleagues (2016) found that incentives and penalties greatly increased participation (by 60%) when used in WWP. The study also found that businesses with higher female employee rates showed greater participation than other gender groups nationally.

outcome measures.

There is also the question of whether the areas WWP focus on are the areas of biggest need for their employees. Successes of WWP are often determined by outcome measures, such as cost benefit, health benefits, and participation rates. One challenge often faced is outcome measurement tools are non-standardized in government agencies for WWP (Johnson et al., 2018). Johnson and colleagues (2018) report the struggle with trying to determine outcomes, of the programs, when there is no good baseline or standard format to use. Without measuring

success of the program correctly, it is hard to determine if the true health issues of the agency employees are being addressed by WWP.

Purpose

The purpose of this research is to determine effectiveness of Worksite Wellness Programs (WWP) related to incentive-use in Government Agencies in Minnesota. Also, to explore relationships between incentive-use in varying government agencies in Minnesota and the success levels of those Worksite Wellness Programs. Results of this research may better inform companies and increase the rate of successful programs in the state of Minnesota. Unfortunately, there is a lack of research on what influences success of WWP and whether incentive plans for this type of program would increase their success. Research has not intensively examined the differences between agency size and how that relates to program success. This study will look at multiple variables of WWP to determine if there is more that can be done to ensure program success. The study will determine whether incentive-use has links to participation and the cost of the program. By understanding the goals set by each program, researchers may be able to determine the level of success that is expected by stakeholders and program coordinators.

It is hypothesized that successful WWP will use Incentive Based Worksite Wellness Programming to facilitate goal achievement. Additionally it is hypothesized that positive, or successful, results of WWP (program goals being met) will result in the longevity of the program and continued support from stakeholders. Data is collected to answer the following questions:

1. What similarities and differences can be found with WWP offerings at each government agency level in Minnesota?
2. What types of incentives are being used in WWP in Minnesota Government Agencies?
3. What correlations can be found between incentive-use and cost savings in WWP?

4. What is the association between type of programs offered and cost savings outcomes?

Limitations

One limitation of the research is the quality of data government agencies have regarding their WWP. Additionally, government agencies have political and legal requirements that must be followed in regard to incentives to employees. These legal restrictions may pose issues to incentive use in programs if agencies are not allowed to have their employees benefit from their employment. Therefore, data obtained may be limited.

Delimitations

The first delimitation is that the study will be limited to government agencies. These will be companies that fall in the government agency category: county government offices, state agencies and universities, and city government offices. The second is that these government agencies will be limited to the state of Minnesota.

Assumptions

The first assumption is that survey methods will be in a lay-language format that is easily understood by participants in the area of focus. The second assumption is that the survey will only be taken by professionals who are in qualifying government agencies and have knowledge of the WWP. Third, an assumption can be made that the Program Coordinators will answer the survey honestly and knowledgeably about their program. Lastly, an assumption can be made that those taking the survey would be answering based on the current status of their programs.

Definitions

- Worksite Wellness Programs (WWP) A wellness-based program that offers assistance and support, in regards to specific health issues, to employees at a business or agency.

- Incentive-use can be defined as offering a financial benefit, post program penalty, or some sort of discount to employees for participating or being successful in a WWP.
- Government Agency Classification is defined as the level of government the agency falls under.
- Program Outcomes can be defined as the expectations stakeholders, employers and program coordinators have for the program and whether it meets the goals set.
- Program Goals can be defined as the criteria set up in program design, implementation and evaluation by the agency to determine success in the program.

Chapter 2

Literature Review

WWP create opportunities for people to address chronic and non-chronic health conditions while at work (Almeida et al., 2015). These types of programs can address health issues related to smoking, physical activity, diet, mental health, and stress management which have all been proven to contribute to chronic disease and death (Mattke et al., 2015). WWP are often utilized by agencies to offer wellness options at work and some programs offer incentives to increase participation and further increase benefits. These programs can have a wide range of goals, from happier employees to decreased insurance costs (Munich, 2016 p. 389). In order to maximize effectiveness, agencies often have an individual or group of people with education or a vested interest in the wellness of employees to create these programs (Minnesota Management & Budget [MMB], 2018).

There are many reasons employers take on the responsibility of a WWP. Some agencies hope to see financial gains in terms of health management and decreased insurance costs, and these gains can lead to increased funding from employers to WWP (Madison, 2016). Studies show flaws in the logic as agencies that strictly focus on financial gain may not target the health issues directly related to their employees (Madison, 2016). Studies show another cost reduction can come from increased employee morale, decreased absenteeism, and increased presenteeism by employees which can improve productivity of a workplace (Schwatka, et al, 2018). Results showed improvements in health conditions by employees in larger businesses, however, less of a change in absenteeism and presenteeism than expected in this size business.

Many studies have shown success in WWP in terms of reducing health risks by targeting specific health topics, for example, weight loss or smoking cessation. One study suggests that an incentive based program with specific weight loss goals decreased overall weight loss issues in workplaces (Almeida, et al, 2015). In another study, obesity was the target issue addressed in the program, and measurements of weight and BMI were used to determine success (Scoggins, et al, 2011). The results showed the WWP in place demonstrated significant weight management benefits related to a decreased BMI for employees.

Research indicates there is some value in incentive-use offerings to facilitate participation and success of WWP; as incentive-use has primarily shown an increase in participation in WWP (Bradley, Chan, Fu, Stampfer, & Viswanathan, 2016). Also, some studies have shown incentive-use compared to no incentive-use had different effects on the results. “Behavioral Weight Management Programs proved to be more effective when incentives are offered; non-incentivized sites showed a 5lb deficit in WL compared to incentivized sites” (Lahiri & Faghri, 2012, p. 3). A similar study showed that outcome based incentives both increased participation in WWP but also increased the biometric health benefits by employees from the interventions in the WWP (Batorsky et al., 2016).

Multiple barriers to the success of WWP have been noted in research collected between 2011 and 2018. Yu and Colleagues (2017) showed that transitioning a design from a controlled environment to a real-world setting created some goal discrepancies and challenges. This indicated that employers should consider design flaws and goal setting in WWP as results may not be duplicated from trial into actual WWP (Yu, et al, 2017). Additionally, there are many legal/ policy restrictions in government that create barriers in the success of a program (Davey,

Garcia, Pomeranz, Vesprey, 2016). Davey and colleagues (2016) found that 16 different states have policies and laws related to WWP. The study found policies have been created to protect the privacy and fair treatment of employees and their medical issues.

Chapter 3

Methodology

The purpose of this study is to explore relationships between incentive-use in varying government agencies in Minnesota and the success levels of those WWP. Independent variables include level of government agency, size of agency, and incentive-use in WWP. Dependent variables include cost of program and success of program. This study will evaluate the relationship between these variables and the effects of incentive-use.

Study Design

The research design is a quantitative study. A correlation test will be used to assess the correlation between 2 continuous variables but also control for possible covariates. Chi-Squared tests may be used to determine the variances in each group. If each section is analyzed separately a Spearman's Rho test will help determine the strength of the correlations in each area.

Participants

The participants will be recruited from government agencies in Minnesota. Worksites were chosen and grouped in the following categories of government agencies: city, county and state level. The coordinators will be expected to self-report on demographics, participant attendance, incentive-use, success rates, and goals and objectives of their individual program. Participants were chosen in a stratified sampling format. The first grouping is a category of state agencies/coordinators that oversee WWP for employees of the state of Minnesota. Potential participants were selected from a "Wellness Champions" roster posted by Minnesota Management & Budget (MMB). Wellness Champions are employees at an agency that play a

leadership role in WWP and represent their agency on a team of likeminded individuals. There are 145 Wellness Champions at the State Level in Minnesota. This program gives them access to resources and information that can be used as each agency sees fit (MMB, 2018).

There are 87 counties in Minnesota. County level participants came from agencies with Statewide Health Initiative Program (SHIP) Coordinators. SHIP Coordinators are hired as County employees that work out of the County Public Health offices. These coordinators are spread throughout the state and have a focus of Health and Wellness in their career choice. This grouping covers a wide area to get a variety of responses throughout the state of Minnesota.

There are over 800 cities in Minnesota; WWP are more likely present in cities with city employees to serve. The goal is to get cities from across the state with government employees (e.g. Law enforcement, Park and Recreation staff). There are 305 city Police Departments in Minnesota. At the city agency level, those 305 cities in Minnesota will be evaluated. Contact information was collected from a Minnesota Parks and Recreation Association (MRPA) list. MRPA provides a list of employees that play a wellness role in their city. This database should prevent replies from one localized area of cities in the Minnesota. These cities are more likely to have WWP as they have employees to utilize the program.

This format estimates the survey will be distributed to approximately 500 government agencies in Minnesota. A 25% response rate overall is the goal. The targeted sample size will be determined in each group. The goal is 60 of 305 city level responses, 25 of the 87 county agencies to respond and 50 of the 145 wellness champions from state agencies to respond. The selection of participants ensures the test subjects are not limited to one localized area in Minnesota.

Instrumentation

A survey will help uncover how each agency determines success and outcomes of their programs, as well as the incentives they offer to employees. The survey will be used to collect data, which will provide a quantitative evaluation and summary of WWP, in government agencies in Minnesota. A survey was chosen as the data collection method for this study because it is a quick, easy and low cost way to gather information from a group of people over a large geographic area. The survey used will be a modified version of the RAND Employer Survey. Questions not related to the goal of this study have been removed from the original survey. The RAND Employer Survey provides information on workplace wellness programs, including the use of incentives, barriers to adopting a wellness program, reasons for discontinuing a wellness program, program evaluation, and program costs (Mattke et al., 2015). The survey, used in this study, will utilize some questions from each categories of the RAND Survey, although, primary focus will be on incentive-use and the relationship it has to participation rates, program evaluation, and program cost.

Content validity has been verified on the previous RAND Survey, as the areas to be measured in this study are covered in the original survey. RAND determined the questions on the survey addressed the research questions. Modifications to the survey only included the removal of questions that do not apply to these research questions. The same question formats will be used for the questions that remain on the survey. These questions will be asked to all participants in order to ensure reliability of the results.

Data Collection

Surveys will be distributed to WWP coordinators throughout the state of Minnesota via email contact. Email is the low cost and time sensitive choice for getting responses in a timely manner. The email addresses have been collected from the MRPA list for city agencies, SHIP Coordinators for county agencies and Wellness Champion lists for state agencies. The survey will be sent out in early 2019. Initial emails will be sent and follow up emails will be sent for those that have not responded within 2 weeks of initial email.

Data Processing & Analysis

Data will be processed using SPSS software to organize and process the data. For this study, data is collected to answer the following questions:

1. What similarities and differences can be found with WWP offerings at each government agency level in Minnesota?
2. What types of incentives are being used in WWP in Minnesota Government Agencies?
3. What correlations can be found between incentive-use and cost savings in WWP?
4. What is the association between types of programs offered and cost savings outcomes?

The use of descriptive analyses and correlation association testing will determine the answers to the above questions. Results will show multiple outcomes and there are more than one predictor variable to analyze. Correlation testing will determine the strength of each section of the survey.

Summary

Previous research shows comprehensive evaluation of Worksite Wellness Programs (WWP), however, there are holes and gaps in current research around incentive-use and program design for success in WWP. Future evaluation is needed to address how incentives are being used (if being used), and also what the results of the use of incentives have been in current WWP. Additionally, research needs to address how agencies are working through policy

and legal restrictions around incentive-use, as well as, issues in WWP related to design and goal setting.

In summary, the research will use a survey format that has been tested and duplicated in many environments to collect information. Multiple authors have used the 2012/2013 RAND Employee Survey information to determine success in WWP (Batorsky et al., 2016; Madison, 2016; Mattke et al., 2016). This survey will be sent out to a stratified group of wellness individuals from agencies at three different levels of government in the State of Minnesota. Participants will be asked to report on the current status of their WWP at their agency. We will use regression methods in data analysis to ensure all variables are accounted for. The study should answer questions related to incentive-use, participation rates, success of programs, and cost related to WWP. The goal is that information from this study can be used by government agencies or businesses to create more success in WWP for employees.

Chapter 4

Results

Introduction

The purpose of this research was to determine effectiveness of WWP related to incentive-use in Government Agencies in Minnesota. Also, to explore relationships between incentive-use in varying government agencies in Minnesota and the success levels of those WWP. As well as, determine if there is an association between types of programs offered, incentive-use and cost savings outcomes.

Demographics

The survey was sent out to 485 government agencies in Minnesota and there was an 18% response rate of people who answered all or part of the questions on the survey. The survey was completed by 33 cities, 23 counties and sixteen state agencies in Minnesota. There were nineteen responses did not indicate what level of government was being reported. Of the agencies that responded, 7% reported that they did not offer any form of WWP. Results show both monetary and non-monetary incentives were offered by 30% of the agencies to encourage participation.

The survey included questions on whether Health Risk Assessments, Disease Management programs, Clinical Screenings and Lifestyle Risk Management programs were offered by agencies. When asked about cost savings outcomes 20% of agencies reported no measureable cost savings from WWP. Cost savings outcomes included in the survey were reduction in insurance costs, increased presenteeism, lower turnover rates, and savings from improved employee productivity.

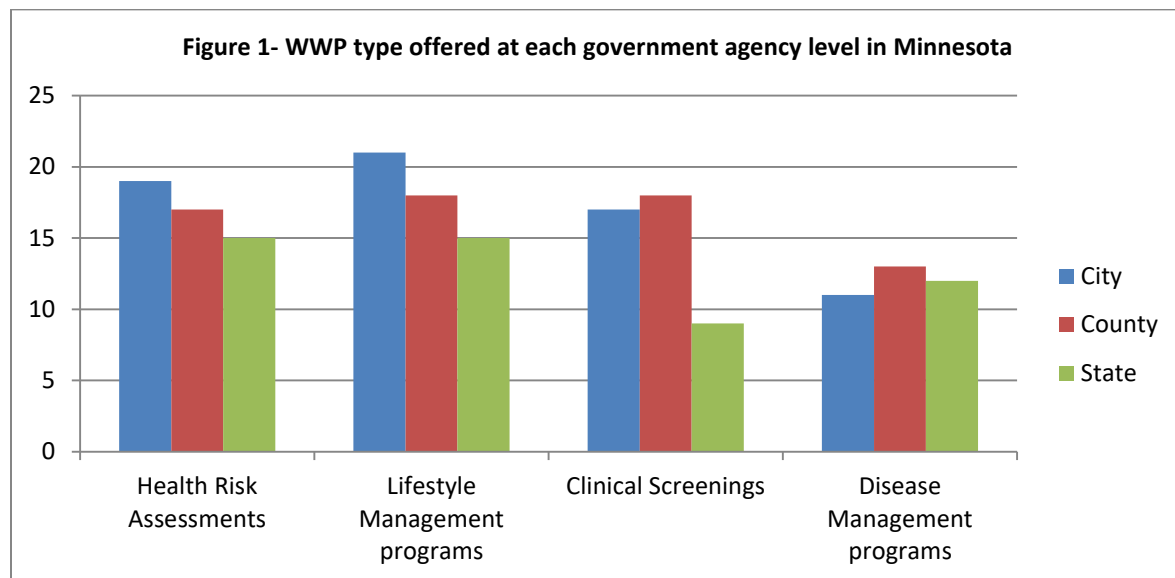
Research Questions

1. What similarities and differences can be found with WWP offerings at each government agency level in Minnesota?
2. What types of incentives are being used in WWP in Minnesota Government Agencies?
3. What correlations can be found between incentive-use and cost savings in WWP?
4. What is the association between types of programs offered and cost savings outcomes?

Response to research questions.

Research Question #1: What similarities and differences can be found with WWP offerings at each government agency level in Minnesota?

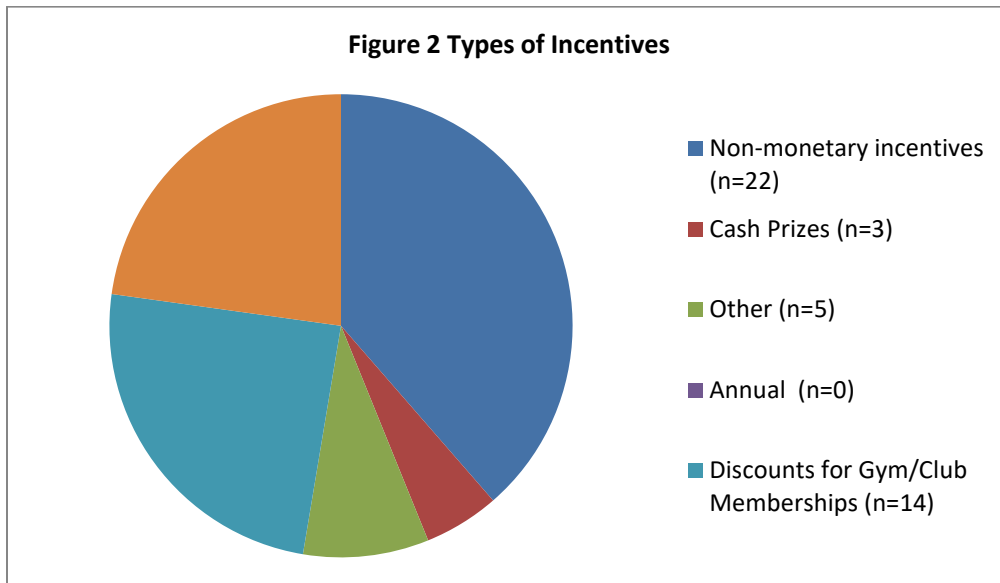
Data showed in city level agencies that responded to the survey, 75% use some form of WWP. At the county level, 86% of agencies that took the survey reported offering one of the 4 types of WWP. Of the state level agencies that responded, 94% of the reported WWP use (See Figure 1).



Research Question #2: What types of incentives are being used in WWP in Minnesota Government Agencies?

The survey revealed that both monetary and non-monetary incentives were used to motivate participation in WWP. In the government agencies in Minnesota that answered the

survey, 35% reported the use of monetary incentives in their WWP (n=25). 31% of government agencies in Minnesota that completed the survey reported the use of non-monetary incentives in their WWP (n=22). Government agencies in Minnesota used several different types of monetary and non-monetary incentives (Figure 2).



Research Question #3: What correlations can be found between incentive-use and cost savings in WWP?

We used a Chi-Squared test to assess incentive-use and cost savings in WWP. The results of the test failed to reveal a statistically significant relationship between incentive-use and cost savings in WWP in government agencies in MN ($\chi(1) = 2.692, p = .101$). Of the agencies that reported cost savings (N=26), 23% reported they did not use incentives (n=6). In the agencies that reported incentive use (N=29), 69% reported cost savings (n=20). Due to the limitations in responses on the survey, there are too many factors that could play a role in cost savings and incentive-use to gain a conclusive answer from this research.

Research Question #4: What is the association between types of programs offered and cost savings outcomes?

Data was examined to determine whether agencies reported cost savings if offering specific types of programs. There were many agencies (N=41) which responded to the survey regarding the use of Health Risk Appraisals, 59% reported cost savings outcomes (n=24). Of the agencies which reported the use of Lifestyle Risk Management programs (N=41), 63% also reported cost savings outcomes (n=26). Results show 61% of agencies reported cost savings (n=20) whom also used Clinical Screenings (N=33). Of the agencies (N=29) reported to use Disease Management programs 62% reported cost savings outcomes (n=18).

Summary

The response rate was 18% for the survey. A majority of the responses came from agencies in Minnesota with employee salaries ranging from \$50,000 to \$75,000 annually. 70% of responses came from agencies with 399 employees or less. Additional responses from agencies that completed the survey reported that 40% of program evaluation was done via employee satisfaction surveys. Other methods for evaluation were goal achievement measures and specific program outcome evaluations.

Survey results show the most common barrier to the success of WWP is lack of financial resources and employee resources. Other barriers reported were lack of management support and lack of employee awareness of programs. Agencies which reported they did not offer WWP, reported the reasons being they believe WWP are not cost effective, lack of financial resources and no designated staff to run a program.

Chapter 5

Interpretation

The purpose of this research was to determine effectiveness of WWP related to incentive-use in Government Agencies in Minnesota. Also, to explore relationships between incentive-use in varying government agencies in Minnesota and the success levels of those WWP. Results of this research may better inform companies about the current status of WWP in government agencies in the state of Minnesota. The results of the research did not show statistical significance that incentive-use, whether monetary or not, had an association with cost savings outcomes set by government agencies in Minnesota. The results do offer a little insight into barriers, evaluation tactics and program offerings in terms of WWP in government agencies.

A national study done by Batorsky and colleagues showed that future research on participation rates and incentive-use is needed (Batorsky, et al, 2016). Researchers in the present study were unable to collect conclusive participation rate information. There were limitations in the responses regarding participation rates of WWP programs in government agencies in Minnesota. Results of participation information in this survey were unable to be achieved due to incomplete responses on the survey.

The original RAND National Survey regarding WWP found that there are many variables that can contribute to motivation to participate in a program. There are also equally as many barriers to motivation, such as the effort needed to complete a program such as exercising and eating healthy (Mattke, et al, 2015). These results could support the inconclusive results of the Minnesota government agency study regarding whether incentives play a role in participation. For program coordinators, understanding the importance of tracking participation rates can

improve the data surrounding this topic and give a baseline to evaluate the use of the programs to help determine success.

The same RAND study results showed a higher rate of incentive use at 84% of companies across the United States reporting the use of incentives. At minimum these incentives were trinkets, t-shirts and coffee mugs (Mattke, et al, 2015). This shows that Minnesota government agencies may not be utilizing incentives at as high of a rate as companies nationwide. The RAND study also showed that a majority of agencies that responded to the survey utilized funds from grants and insurance companies to run a WWP (Mattke, et al, 2016). The results of the Minnesota government agencies study do not show the use of additional resources and funding at that high of a rate. Most of these Minnesota agencies reported internal funding as the primary source of funding for their WWP. For health educators, this information can provide guidance for information that can be useful in persuading stakeholders to support or start a program. Funding was listed as an issue in government agencies in Minnesota and information surrounding grant and insurance company funding options can be used to support the financial burden of a WWP. The additional funds can also be used to encourage participation in a program with the use of monetary and non-monetary incentives.

Recommendations for Practice

This newly found information can serve as a resource to health educators in Minnesota currently offering WWP or looking to offer WWP at their government agency. This study collected information regarding types of programs offered, barriers, types of incentives used, and reasons government agencies in Minnesota do not offer WWP. This study provides

information that can be used to determine what programs can and are being offered currently at each level of government. Health educators can use this information to determine opportunities for additional program offerings in their programs. They can also compare the offerings of their programs to those at their agency level of government.

The study provides information on what types of incentives are being used in WWP in government agencies in Minnesota. Incentives in both monetary and non-monetary formats may not have shown a direct correlation with cost savings outcomes in government agencies in Minnesota, however, the information about what incentives are being used and what programs are being offered with incentives can be valuable to program coordinators.

The study uncovered additional information outside of incentive-use that could be beneficial to health educators and current WWP coordinators. The results offer information regarding evaluation methods being utilized by current WWP in these types of agencies which if used correctly can help determine success of programs. Evaluation has been reported as used at the highest rate in employee satisfaction surveys. Utilizing other evaluation methods such as goal and objective setting and reporting of cost savings outcomes can help program coordinators determine what about the program is working and where there is room for improvement. There is also information that provides insight to the barriers faced by programs. This information can be valuable to both new and current program coordinators to determine what is working and what aspects of programs need improvement to avoid future barriers. Evaluation and understanding the barriers that are currently faced or have been faced by WWP coordinators in agencies in Minnesota can help new programs or current programs avoid some of the mistakes being made and reach success rates in a WWP sooner.

Lastly, this information can be used to advocate for funding for WWP. The study showed that compared to studies done at the national level there is room for improvement in ingenuity of funding for WWP in Minnesota. Health educators can utilize this information to work with stakeholders to find additional funding for programs outside of internal budgeting.

Recommendations for Future Research

The use of penalties with or instead of incentives would be an interesting place to start additional research. Penalties in WWP can be administered several different ways. Increased insurance costs due to failure to see health changes are one form of penalty. Lack of success in a program could mean penalties in regards to specific programs. A 2015 study looked at incentive-use in smoking cessation programs and this could be expanded into penalties for not meeting specific program goals to get an idea if penalties have any correlation to specific program success (Yeo, et al, 2015). This information as well as additional information on incentive-use and types of incentives that effect WWP can help further uncover if there is a correlation with WWP success.

Our study had limitations in regards to participation, and the results of our research correspond with that found in another study done on a national level. "Future research should investigate other incentive designs and strategies that aim to increase employee participation." (Batorsky, 2016, p. 202) This study suggests that participation rates may be affected by incentives and additional research would need to be done to look into this further.

Additional information regarding legal restrictions and barriers to offering incentives is needed to determine if they are factors that affect the cost savings outcomes WWP in government agencies in Minnesota. Pomeranz and colleagues in a 2016 study compiled a list of

state laws and regulations for various agencies in various states to use as a resource for what criteria need to be met to use incentives in programs (Pomeranz, et al, 2016). The association these laws and policies have with cost savings outcomes and how they vary for each state is information that could be beneficial to program coordinators. A deeper understanding of specific state restrictions and the barriers they create for WWP could be very valuable in determining creative ways to increase program participation with or without incentives.

Conclusions

We used a digital email-based survey to collect information on WWP in government agencies in Minnesota. In terms of associations between incentive-use and success rates, results were inconclusive. Due to limitations in responses on the survey we are unable to draw a correlation between incentive-use and cost savings outcomes for agencies surveyed. Limitations in responses regarding participation rates did not allow for researchers to support statements regarding incentive-use and participation rates. Other research on this topic has been completed on a national level. Results of those surveys showed participation rates being an unanswered question that would require further research (Mattke, et al, 2016).

Survey results did provide other information that can be useful by health educators to improve and grow WWP. Results showed that compared to national rates, government agencies in Minnesota may not be utilizing additional funding resources for WWP. Future research on the use of grant and insurance company funding programs for WWP could be beneficial. Information regarding barriers to program success and reasons agencies in Minnesota do not have programs was uncovered in survey results. Some of these barriers include laws and policies at the state level that may inhibit incentive-use in programs. This

information can be used to improve current programming as well as a resource for starting new programs. Strengths in the research can be found in the information surrounding evaluation tactics used by agencies in Minnesota currently to determine program use and success. Also, Disease Management programs were reported to be utilized the least across government agencies in Minnesota. Information regarding types of programs offered at each level of government can be beneficial to agencies looking to start or expand a WWP.

In conclusion, while results may not have provided conclusive results to confidently associate incentive-use with WWP success and cost savings outcomes, a great deal of information was uncovered that can help Minnesota agencies with WWP. This research creates many future opportunities to look further into variables that can have an impact on success in WWP as well as factors that contribute to cost savings outcomes for agencies offering WWP. The results of this research show the many opportunities to expand on the topic as to continue growth and potential success in WWP.

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