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Engaging Managers and Supervisors to Support Employee Health

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A dissertation submitted in partial fulfillment
of the requirements for the degree of

Doctor of Philosophy

University of Washington

2017

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Program Authorized to Offer Degree:

Health Services – Public Health

University of Washington

Abstract

Engaging Managers and Supervisors to Support Employee Health

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The workplace is an important avenue for supporting workforce health. Employees spend the majority of their time in the workplace. Visible support for a healthy lifestyle from leadership, direct supervisors, and coworkers may positively impact employees' perception of support for health, as well as other work-related measures. The goal of this dissertation is to validate an instrument measuring employees' perception of workplace support for health, identify strategies that will engage managers and supervisors to support employees' participation in wellness programs, and explore the potential benefits of supporting employees' wellness efforts in the workplace.

In the first aim, we test the reliability and validity of a five-item scale measuring employees' perception of workplace support for health (from leadership, direct supervisor, and coworkers). This study uses survey data collected from small workplaces in King County, Washington at three time points from 2013 to 2017. We demonstrate that the instrument is reliable, detects change in employees' perceptions over time, and is valid among a population of small workplace employees. When implementing workplace health promotion interventions, researchers and practitioners can use the scale to assess employees' perception of workplace support for a healthy lifestyle.

In the second aim, we evaluate managers' barriers and facilitators to supporting employee participation in the Washington State wellness program using an exploratory sequential mixed methods study design. We interviewed and surveyed state employees in management positions (executive, middle, and line), at four Washington State agencies located in the greater Olympia area. The results suggest that managers support the wellness program, but they also face challenges with accommodating employees' participation due to workload and scheduling. About half the managers receive support from the manager above them, and most have not received training on the wellness program. We identified several strategies that may assist managers in supporting their employees' participation in wellness programs: the provision of training, formal expectations, and encouragement to provide support for employees' participation.

In the third aim, we explore the direct and indirect associations between perceived managers' support for wellness (actions taken by managers to support participation in wellness programs) and employees' engagement at work. We conducted a path analysis using employee survey data from two Washington State agencies located in the greater Olympia area. Our findings suggest managers' support for wellness has moderate indirect associations with employees' engagement at work. We found the relationship between the perception of managers' support for wellness and employees' engagement is mediated by other variables, such as perceived respect and feedback, and agency support for health. The perception of managers' support for wellness has indirect benefits for employees' engagement at work.

Acknowledgments

I wish to acknowledge my six siblings: Adam, Sarah, Josh, Matt, Nate, and Tommy. They thought I was crazy for moving to Seattle to pursue a PhD, and they loved and supported me regardless. I would not be here without their love and support. I want to thank my parents, Paula and Clark, for not giving up after the sixth child. I want to give a big shout out to my second family in Texas: Colin, Linda, and Mike. I love you all.

I wish to thank my Dissertation Chair, Peggy, and the rest of my committee Jeff, Gary, and Debbie Cherry. I appreciate your feedback and guidance throughout the program. I want to acknowledge Dave Grembowski and Lauren Brackenbury (and Suzanne Yates) for their help and assistance during the most critical times of the program. I want to acknowledge the love and support from my cohort: Ann Nguyen, Alex Woerschling, Kara Bensley, and Sungchul Park. I am so thankful for all the study sessions, cohort dates, and rides to the mountains. We have the best cohort (HSERV 2013). I also want to acknowledge the love and support from the other Health Services PhD students in cohorts above and below mine. Thank you for the PhD ladies' nights, holiday parties, and happy hours that provided social interactions outside of the windowless PhD office.

Finally, I am grateful for the funding received from the Occupational Health Services Research Traineeship sponsored by the Departments of Health Services and Environmental and Occupational Health. I am also grateful for the funding provided through a research assistantship at the Health Promotion Research Center.

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Chapter 1

Introduction

The workplace is an important avenue for implementing health promotion interventions to improve health-related and economic outcomes for the workforce.¹ Employers recognize that employees experiencing poor physical and mental health have reduced performance, safety, and morale.² The organizational cost of employees with modifiable health and psychosocial risk factors is evident through higher healthcare costs and disability expenses, lower productivity, and higher employee turnover.³ The provision of worksite health promotion programs can improve the economic and health outcomes for employers and employees.^{2,3} Worksite health promotion programs, or wellness programs, are initiatives aimed at primary, secondary, and tertiary chronic disease prevention efforts. Low employee participation can diminish the potential health and financial impacts of wellness programs.⁴ Research suggests employer support of employee health and well-being is an important factor for implementing successful wellness programs.¹

Previous research suggests that managers and supervisors (hereafter managers) are potential barriers to employee participation in wellness programs.⁵ Results from a feasibility trial of wellness programs indicated resistance from employers, who viewed health promotion as not benefitting the business and not their responsibility.⁶ Further research on managers' beliefs about wellness programs has yielded contradicting results. While managers believe that wellness programs can improve employee health and is important to provide, many feel it is not the employer's responsibility to support a healthy lifestyle for employees.^{7,8} Managers mediate the relationship between wellness programs and employee wellbeing by providing support, or not.⁹ For example, executive managers mediate by allocating the resources (human and financial) to implement and support wellness activities that target employees' wellbeing.⁹ Line and middle

managers may have a more limited role in supporting wellness programs, for example, they act as gatekeepers for employees' schedule and time. Line and middle managers may also be an important factor for supporting employees' participation.

The workplace influences employee health-promoting behaviors, and manager support of health may be an important factor for improving employees' participation in wellness programs. Employer support of employees' health and well-being is an important factor for successful wellness programs. Employer support includes implementing policies that support employees' participation in wellness, visible support from leadership, and a workplace culture that supports employees' health. Managers make decisions regarding the implementation and allocation of resources for wellness programs, they provide leadership and strategy for the organization, they influence the workplace culture through their behaviors and practices, and they have daily interaction with the employees they supervise. Therefore, this study proposes the following specific aims:

Specific Aim 1: To test the reliability and validity of a five-item instrument that measures the perception of workplace support of health among employees in small workplaces. The Workplace Support for Health scale measures employees' perception of support for health from company leadership, direct supervisor, and coworkers. This study will examine the internal consistency, underlying factor structure, ability to detect change, and concurrent validity. It is anticipated the instrument will be a reliable and valid measure of employees' perception that their workplace supports a healthy lifestyle for employees in small workplaces.

Specific Aim 2: To evaluate managers' barriers and facilitators to supporting their employees' participation in wellness programs. This study will use sequential exploratory

mixed methods research to generate in-depth knowledge about the factors influencing managers' support of and engagement with wellness programs. We will use the results to identify strategies that will boost managers' support of employees' participation in wellness programs.

Specific Aim 3: To explore the association between managers' support for employees' wellness efforts and employees' engagement at work. This study will use a path analysis guided by the Social Exchange Theory, to examine the relationship between managers' support for wellness and employees' engagement at work. It is hypothesized that managers' support for wellness will have positive direct and indirect associations on employees' engagement at work, as well as other work-related measures.

The results from this dissertation will provide 1) psychometric evidence for an instrument to measure employees' perception of workplace support for health, 2) strategies to improve managers' role in supporting employees' participation in wellness programs, and 3) preliminary evidence for the relationship between managers' support for their employees' wellness efforts and work-related measures, like engagement at work. Results from Aim 1 will provide evidence for the reliability and validity of a five-item scale that can assess employees' perception of workplace support for a healthy lifestyle from leadership, direct supervisor, and coworker support. Support from managers is often cited as an essential component of wellness programs, but it is unclear what factors impede or facilitate management support for employee participation. The results from Aim 2 will provide strategies that may boost the role of managers in supporting employee participation in wellness programs. The exploratory analysis from Aim 3 sheds light on the relationship between managers' support for employees' wellness efforts and employees' engagement at work.

These dissertation aims are innovative in several ways. The Workplace Support for Health scale is administered to employees to assess their perception of support for a healthy lifestyle. Establishing the reliability and validity has the potential for further dissemination and use among practitioners and researchers. It is clear that managers' support for wellness programs is important. However, there is limited evidence regarding managers' role in supporting employees' participation in wellness programs. The Health Promotion Research Center and the Washington State Health Care Authority partnered together to conduct research on managers' role in supporting the wellness program. Washington State is one of the largest employers (with >60,000 employees excluding higher education) and there is already a robust wellness program in place, which provides the necessary context. Finally, we introduce the concept of managers' support for wellness, which is defined as employees' perception of managers' support for their wellness efforts. There is not a lot about this topic in the literature, however, if supporting employees' wellness efforts has a positive relationship with workforce metrics, such as engagement at work, this may be an incentive for employers to support wellness programs.

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Chapter 2

The Workplace Support for Health Scale: Reliability and Validity Among Small Workplaces

Abstract

This study examines the psychometric properties of the Workplace Support for Health scale that measures employees' perception that their workplace supports a healthy lifestyle for employees. This study uses survey data from a randomized trial of small workplaces (20-200 employees) located in King County, Washington. We collected employee- and employer-level data at three time points between 2013 and 2017. The analysis indicates that the scale is reliable across all time points, can detect change in employees' perceptions, and demonstrates construct validity. We found that employees are aware of the support they receive in the workplace and the perception of support can change according to what the employer is implementing. The five-item scale is a reliable and valid measure of perceived workplace support for health among small workplace employees.

The workplace is an important channel for implementing interventions that prevent chronic disease and support employees' health behaviors. The work environment is influential on employees' health and well-being.¹ Workplace practices, such as poor social support and high work load, can have deleterious effects on employees' health over time.² For example, employees working in unhealthy work environments have lower life expectancies.² Employees experiencing poor physical and mental health have reduced performance, safety, and morale.³ For employers, this can translate to higher medical costs and worker's compensation claims, and lower productivity.^{3,4} Workplace practices that prioritize employee health and wellness can decrease turnover, increase job satisfaction, and improve the health of the workforce.^{5,6}

Small workplaces make up a large portion of all workplaces in the United States and are an important contributor to the economy.⁷ The social organization (e.g. attitudes and norms) in small workplaces influences employees' perceptions of their own health.⁸ Research suggests that small workplace employers feel intervening on employees' health in the workplace is paternalistic.⁹ Smaller workplaces (<1,000 employees) are less likely to offer health insurance or health promotion programs compared to larger workplaces.¹⁰ Qualitative research among small workplaces indicates that employees in unsupportive work environments are more likely to view their individual health status as being the employer's responsibility.¹¹ Small workplaces can support employees' health by aligning organizational structures and processes with evidence-based practices and policies that support workforce health.^{9,11}

Workplace support for health is the visible commitment to employees' health, the health culture of the workplace (e.g. health norms and attitudes), and the support structures for employees.^{12,13} Previous research defines workplace support as the product of interpersonal work relationships (coworker and supervisor support) that has the feasibility to promote the well-being

or coping abilities of the recipient.^{14,15,16,17} The workplace refers to the place of employment, and the worksite is defined as the physical location where employees work.¹⁸ Workplace policies and visible leadership support for employees' health is important for maintaining a healthy workforce.¹³ Workplace support for health is demonstrated through the behaviors and attitudes of leadership, direct supervisors, and coworkers. For example, a "wellness champion" is an individual (e.g. an employee or leader) in the workplace that is proactive and encourages empowering actions, such as changing work policies and facilitating employee control over health initiatives.¹⁹ Wellness champions can influence the culture of a workplace and provide a supportive work environment for employees.¹⁹ The perception of a supportive work environment (e.g. organizational policies, supportive supervision, coworker interrelationships) increases the likelihood that employees will use available resources in the workplace.¹⁸

In this study, we present the Workplace Support for Health (WSH) scale that measures employees' perception of support for a healthy lifestyle from leadership, direct supervisor, and coworkers. The objectives are to examine the reliability and validity of the WSH scale among employees in small workplaces.

Methods and Materials

This study uses data from a randomized trial of small workplaces (20 to 200 employees). Survey data was collected at three time points between 2013-2017 from small workplaces located in King County, Washington. The workplaces are from several industries: accommodation and food services, retail trade, health care services and social assistance, educational services, arts, entertainment, and recreation, and other public services except administration. The randomized trial design and baseline findings are described in more detail

elsewhere.²⁰ Briefly, the randomized trial tested an intervention to implement best practices for worksite health promotion in small workplaces. The original study has three comparison groups: control, standard intervention, and standard intervention plus wellness committees. For this study, we combined the two intervention arms to create two comparison groups, any intervention versus control. The University of Washington institutional review board approved study procedures.

Participants

Approximately 3,302 employees from 78 worksites completed surveys at baseline; 2,449 employees from 68 of the 78 worksites completed 15-month surveys; and 2,328 employees from 63 of the 78 worksites completed 24-month surveys. To test the reliability and validity of the WSH scale, the analytical sample was restricted to worksites that provided both employee- and employer-level data at all three time points. The employee demographics of the analytical sample (n= 7,620) are provided by comparison group and time point in **Table 1**.

Table 1. Descriptive data of the analytical sample*

Employee Demographics	Baseline			15-month			24-Month		
	Full Sample N = 2,679	Control N = 793	Intervention N = 1,886	Full Sample N = 2,613	Control N = 750	Intervention N = 1,863	Full Sample N = 2,328	Control N = 712	Intervention N = 1,616
Gender[^] (%)									
Male	32.0	29.5	33.0	32.0	26.5	34.0 [#]	31.0	29.0	32.0
Female	68.0	70.5	67.0	68.0	73.5	66.0 [#]	66.5	70.0	65.0
Age Mean years ± sd	40 ± 13	41 ± 13	40 ± 13	40 ± 13	40 ± 13	40 ± 13	40 ± 13	41 ± 13	40 ± 13
Education (%)									
High school or less	13.0	8.0	15.5 [#]	12.0	7.0	14.0 [#]	12.5	8.5	14.5 [#]
Less than college	23.0	20.0	24.0 [#]	23.5	21.0	24.5 [#]	24.5	22.5	25.0 [#]
College graduate	64.0	72.0	60.5 [#]	64.5	72.0	61.5 [#]	63.0	69.0	60.5 [#]
Race (%)									
White	61.0	69.0	56.0 [#]	60.0	69.0	55.0 [#]	58.0	65.0	53.5 [#]
Black	7.5	7.0	11.0 [#]	6.0	6.0	7.5 [#]	6.5	7.5	7.5
Asian	16.0	10.5	17.0 [#]	17.0	11.0	20.0 [#]	18.0	12.0	20.0 [#]
Pacific Islander/ Native Hawaiian	1.5	<1.0	1.5 [#]	1.0	1.0	1.5 [#]	1.5	1.5	1.5
American Indian/ Alaska Native	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0 [#]
Other (e.g. multiracial)	9.0	7.5	10.0 [#]	9.5	8.5	9.5 [#]	9.0	9.0	10.0 [#]
Prefer not to answer	4.5	5.0	4.0 [#]	5.5	4.5	6.0 [#]	6.0	4.0	7.0 [#]
Hispanic/Latino (%)									
No	87.0	91.0	85.0 [#]	86.0	90.0	84.5 [#]	86.0	91.0	84.0 [#]
Yes	10.0	5.5	12.0 [#]	10.5	7.0	11.0 [#]	11.0	6.5	13.0 [#]
Prefer not to answer	3.0	3.5	3.0 [#]	3.5	3.0	3.5 [#]	3.0	2.5	3.0 [#]
Household Income (%)									
< \$49,999	47.0	42.0	49.5 [#]	44.5	38.5	47.0 [#]	44.0	40.0	45.5 [#]
> \$50,000	53.0	58.0	50.5 [#]	55.5	61.5	53.0 [#]	56.0	60.0	54.5 [#]
Workplace Support for Health Score mean (sd)	10.9 (3.8)	11.0 (3.5)	10.9 (3.9)	11.9 (3.7)	10.9 (3.4)	12.3 (3.7)	11.7 (3.7)	10.8 (3.7)	12.1 (3.7)
Employer Implementation Score mean (sd)	0.18 (0.08)	0.20 (0.11)	0.18 (0.07)	0.45 (0.20)	0.21 (0.09)	0.54 (0.15)	0.30 (0.17)	0.23 (0.10)	0.34 (0.18)

*Analytical sample was restricted to worksites that provided both employee and employer-level data at all three time points; [^]The 24-month data collection included additional choices for gender, which are not presented here; [#]Statistically significant difference between intervention and control groups, two-sample t-test (p<0.05).

Measures

Employee Surveys

The employee survey contains measures on workplace support for health, health behaviors, productivity, job satisfaction, and health status. The surveys are available in the four most common languages in King County, WA: English, Spanish, traditional Chinese, and Vietnamese. Research staff administered surveys to all eligible employees (able to read one of the four survey languages, age > 20) at baseline, 15, and 24 months. The survey was provided in paper and pencil format with a small cash incentive (\$5) for employees completing the survey. Employees were not required to participate and could refuse to take the survey.

The five-item WSH scale measures employees' perception that their worksite supports a healthy lifestyle for employees. The scale contains five statements answered on a 5-point Likert type scale, 0=strongly disagree to 4=strongly agree: 1) *Overall my worksite supports me living a healthier lifestyle*, 2) *My supervisor supports me in living a healthier lifestyle*, 3) *Most employees here have healthy habits*, 4) *At my workplace we have one or more leaders who are wellness champions*, and 5) *At my workplace we have one or more employees who are wellness champions*. The items are summed and range from 0 to 20 on a continuous scale, with 0 indicating low support and 20 indicating high support. The means and standard deviations of WSH scores are in **Table 1**.

Employer Assessment Surveys

The employer assessment survey was administered at baseline, 15, and 24 months to a human resource manager or an equivalent manager at the workplace. The employer assessment survey measures the level of implementation of evidence-based best practices for worksite health promotion. The employer survey includes questions about the worksite's implementation of best

practices promoting cancer screening, healthy eating, physical activity, and tobacco cessation. The survey asks five to 10 questions about each of the best practices. The best practices are combined using a weighted algorithm to calculate a total implementation score from 0 to 100, with 0 indicating no implementation and 100 indicating full implementation of all best practices. The means and standard deviations of employer implementation scores are in **Table 1**.

Analysis

Factor Structure

To understand the factor structure of the WSH scale, we used an exploratory factor analysis with *promax* rotation. The factor analysis is a way to identify underlying dimensions and assess the unidimensionality of the scale items.²¹ A set of items are considered unidimensional if the underlying dimension, or latent variable can “explain” the correlation between the items).²² The unidimensionality of a scale is important for interpretability, for example, scores can be described in terms of lower and higher perceived support. We used a parallel analysis to determine the number of underlying factors. The parallel analysis compares the observed eigenvalues from our dataset to the expected eigenvalues extracted from a simulated dataset that contains the same number of (uncorrelated) variables and observations.²¹ The number of underlying factors is equal to the observed eigenvalues that are larger than the expected eigenvalues obtained from the simulated dataset.²¹

Reliability

Reliability is the extent to which a measure provides consistent, or precise, results.²³ We assessed reliability using the internal consistency, which is the extent to which items on an instrument measure a similar concept.²⁴ The internal consistency is judged by the alpha

coefficient. The alpha coefficient ranges from 0 (no correlation) to 1 (high correlation), and is higher if the average correlation between scale items is high. The alpha coefficient should be 0.70 or higher for group comparisons; however, coefficients higher than 0.95 can indicate redundant items.²⁴

Validity

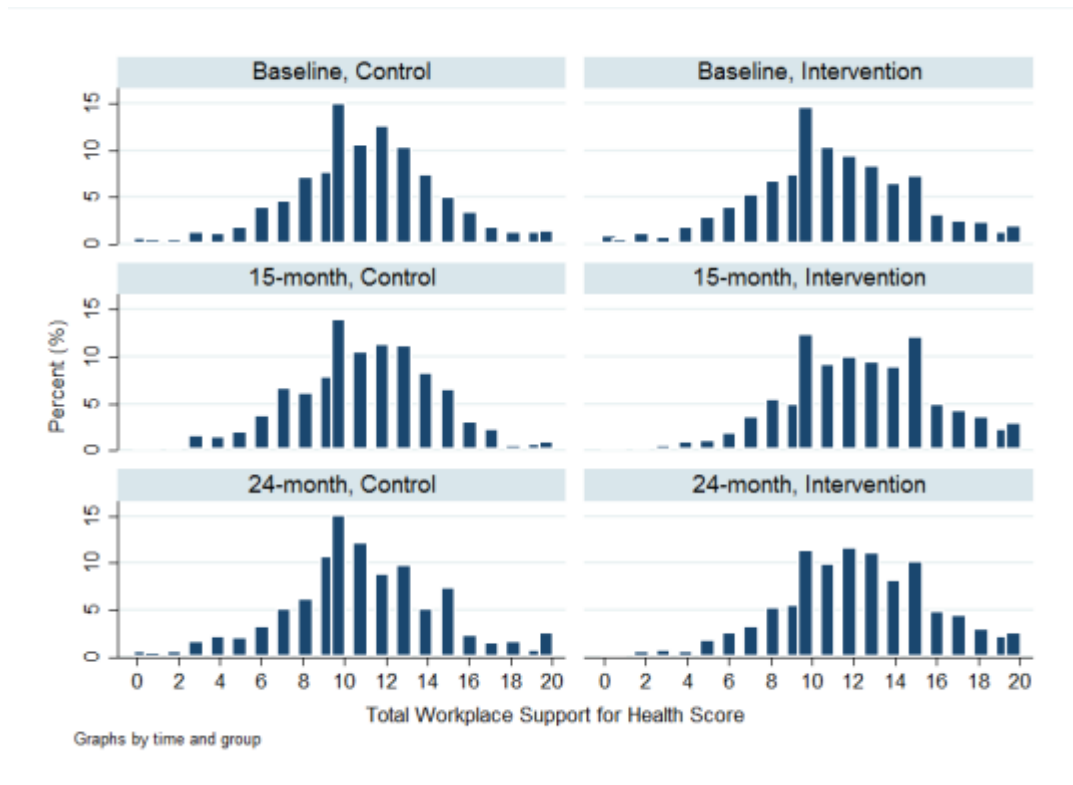
Validity is the degree to which the instrument measures what it purports to measure, or the accuracy of an instrument.²⁴ We assessed the validity based on the ability to detect change and concurrent validity. We assessed the ability to detect change by using a two-sample t-test to compare the WSH scores between intervention and control groups at each time point. We expect the WSH scores to change from baseline to 15- and 24-month follow-up for the workplaces that implemented any intervention, but not for workplaces in the control group. We expect the change in WSH score and employer score to move in the same direction. Concurrent validity is the degree to which the scores from one measure relate to another valid criterion administered at the same time, for example, the WSH scores should be associated with the employer implementation score. We tested concurrent by regressing the employer implementation score on the WSH score. We expect the perception of support to have a positive relationship with the employer implementation score over time. Concurrent validity was tested using a linear mixed-effect model clustered by worksite. We conducted all analyses using Stata 14.0 (College Station, TX).

Results

The characteristics of the analytical sample are in **Table 1**. The intervention and control groups had small, yet statistically significant differences in race, ethnicity, income, and education over the three time points. The WSH scale items had a small amount of missing data

across the three time points (<0.50% missing for each item). The distributions of WSH scores are in **Figure 1**. Overall, the WSH scores did not have floor or ceiling effects; for example, the proportion of employees' reporting extreme values of 0 or 20 on the WSH scale was <1.0% and 2.2%, respectively.

Figure 1. Distribution of Workplace Support for Health scores at each time point.



Factor Analysis

The baseline results of the factor analysis and item correlations are in **Table 2**. The results of the factor analysis are consistent for each time point, indicating relative stability of the WSH scale. The parallel analysis indicates there is one underlying factor, employees' perception of workplace support for health. The WSH items load on a single-factor scale (all items >0.50).

The unidimensionality of the scale allows for scores to be interpreted by low to high perceived workplace support for health. This indicates that the scale can provide a simple measure of employees' perception of workplace support for health.

Table 2. Factor structure and item correlations of the five-item scale at baseline

One-Factor Scale			Correlations*					
Items	Factor Loading [^]	Uniqueness [#]	Items	1	2	3	4	5
1	0.77	0.39	1	--				
2	0.73	0.45	2	0.73				
3	0.57	0.67	3	0.47	0.41			
4	0.73	0.45	4	0.49	0.45	0.42		
5	0.65	0.57	5	0.39	0.37	0.35	0.68	--
[^] Factor loadings are the amount of variable attributed to factor, after oblique rotation, assuming one factor; [#] Uniqueness is the portion of the variable that is unrelated to the factor *Correlations p<0.05								
Items: (1) Overall my worksite supports me living a healthier lifestyle, (2) My supervisor supports me in living a healthier lifestyle, (3) Most employees here have healthy habits, (4) At my workplace we have one or more leaders who are wellness champions, (5) At my workplace we have one or more employees who are wellness champions								

Reliability

Internal Consistency. The items in the WSH scale have good internal consistency at baseline (alpha=0.82), 15-month (alpha=0.82), and 24-month (alpha=0.83) follow-up. The items in the WSH scale have moderate to strong correlations (>0.30).

Validity

Ability to Detect Change. The results of the two-sample t-tests are in **Table 3**. The results indicate the WSH scale can detect change in employees' perceptions. As we expected, the change in WSH scores move in the same direction as the employer implementation scores at each time point.

Table 3. Ability to detect change, two-sample t-test comparing change in perception of workplace support for health and employer implementation score at each time point

Baseline	Intervention	Control	Diff	t-test
Workplace Support for Health (0-20)	10.97	11.0	0.03	p>0.05
Employer Implementation Score (0-1)	0.18	0.20	0.02	p>0.05
15-month	Intervention	Control	Diff	t-test
Workplace Support for Health (0-20)	12.35	10.93	- 1.42	p<0.001
Employer Implementation Score (0-1)	0.54	0.21	- 0.33	p<0.001
24-Month	Intervention	Control	Diff	t-test
Workplace Support for Health (0-20)	12.15	10.86	- 1.29	p<0.001
Employer Implementation Score (0-1)	0.34	0.23	- 0.11	p<0.001

Concurrent Validity. The results from the linear mixed model is in **Table 4**. The increase in the employer implementation score corresponds to a statistically significant increase in WSH scores ($\beta = 3.10$; $p<0.001$).

Table 4. Concurrent validity

	β	S.E.	95% CI	Wald's Test
Workplace Support of Health				
Employer Implementation Score	3.10	0.25	2.60, 3.61	p<0.001*
Intercept	10.50			

*Hypothesis testing whether higher WSH scores are associated with higher employer implementation score over time

Conclusions

The five-item WSH scale is a reliable and valid measurement of employees' perception of workplace support for health. The scale demonstrated reliability and the scale structure was

consistent across three time points. The scale was able to detect change in employees' perceptions and demonstrated concurrent validity. Employees are aware of the support they receive in the workplace and the perception of support can change, if the workplace implements evidence-based practices.

Research suggests that support from multiple sources at work is important for employees' health.^{13,18} The WSH measures employees' perception of workplace support for health from multiple sources, including leadership, direct supervisor, and coworkers. Previous research using a one-item measure found that employees' perception of workplace support for health is associated with lower presenteeism.²⁵ There are published instruments to measure management support for health²⁶, workplace culture of health²⁷, and the psychosocial work environment.²⁸ While these instruments measure important concepts, they do not specifically measure employees' perception of workplace support for health. Previous research suggests that the perception of a supportive work environment increases the likelihood that employees will use available resources.¹⁸ The WSH scale is a brief measure (5 questions) that researchers and practitioners can administer alongside health promotion programs to measure employees' perception of workplace support for health.

This study has limitations and strengths. Self-reported survey data is subject to recall bias and selection bias, for example, unhealthy workers may not be at work and therefore not captured in the sample. Employees may experience and perceive support very differently at their workplace. Responses depend on employees' ability to recall and willingness to share their perceptions. The employee-level data was not individually linked across the time points (repeated cross-section), which limits our ability to track changes in WSH scores for an individual employee. The dataset contains both employee- and employer-level data that was

collected at all three time points. This enabled us to examine how employee and employer scores change over time. The sample size is large (>7,000) and contains employee responses from several industries.

The five-item WSH scale is a brief reliable and valid measurement of employees' perception of workplace support for health in small workplaces. Practitioners and researchers can use the WSH scale to assess whether employees perceive their workplace's efforts to support health.

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Chapter 3

Managers' Barriers and Facilitators to Supporting Employee Health: A Mixed Methods Study

Abstract

The purpose of this study is to evaluate managers' barriers and facilitators to supporting employee participation in the Washington State wellness program. We used an exploratory sequential mixed-method study design to collect qualitative and quantitative data from state employees in management positions (executive, middle, and line), whose job includes supervision of subordinates and responsibility for the performance and conduct of a subunit or group. We interviewed 23 managers and then used the results to create a survey that was fielded to all managers at the four agencies. The survey response was 65% (n=607). We found that managers support the wellness program, but they also face challenges with accommodating employees' participation due to workload and scheduling. About half the managers receive support from the manager above them, and most have not received training on the wellness program. We identified several strategies that employers may use to assist managers in supporting employee's participation in wellness programs: providing training, setting formal expectations, and encouraging managers to provide support for employee's participation.

Research has shown that employee participation in wellness programs can improve health risk factors, decrease burnout, and increase productivity.^{1,2} Wellness programs are workplace initiatives directed at supporting healthy behaviors and chronic disease prevention for employees.² The workplace influences employees' health behaviors through four main avenues: the provision of health insurance, organizational policies, wellness programs, and communications about health.^{1,3} Managers and supervisors (hereafter managers) influence employees' use of health-promoting avenues in the workplace, and this makes them an important upstream determinant of employee participation in wellness programs.⁴ For example, managers mediate the relationship between wellness programs and employee health by allocating resources to support wellness programs, or not.⁵ Managers may cultivate an organizational culture that encourages wellness by visibly supporting employees' health and endorsing wellness programs.⁶ The organizational culture is the product of the individual and group norms, attitudes, and beliefs that determine the organization's commitment to employee wellness.⁷ Employers with successful wellness programs include wellness as part of the organizational culture and provide encouragement and support for employee participation.⁸

Research on gaining managers' support tends to focus on the "business case" for supporting wellness programs, which is often targeted toward executive leaders,⁹ who have responsibility for the overall conduct and performance of the organization. Executive leaders develop the strategies, objectives, and long-term plans of an organization.¹⁰ Middle managers are responsible for implementing executive leaders' strategies and supervising the work of line managers. Line managers supervise the work of frontline employees (who do not hold management positions) and have the most direct contact with them.¹⁰ Unlike executives, middle and line managers are more concerned with the short-term completion of daily job tasks, and not

the long-term objectives of the organization.¹⁰ The incentives to take an active role in supporting wellness programs may not be the same for middle and line managers as it is for executives. Research suggests that successful wellness programs have support from all levels of management (executive, middle, and line).^{8,11}

The role of managers is widely acknowledged as a critical factor for implementing wellness programs and policies, but there is limited evidence on how managers at all levels (executive, middle, line) support employee participation in wellness programs.¹¹ Research on managers' beliefs about wellness programs has yielded contradicting results. While some managers believe that wellness programs improve employee health and are important to provide, many feel it is not the employer's responsibility to support a healthy lifestyle for employees through workplace wellness programs.^{11,12} To understand managers' role in supporting wellness programs we conducted a mixed-methods study to explore managers' barriers and facilitators to supporting their employees' participation in wellness programs.

Methods

We used mixed methods to understand managers' role in supporting wellness programs. Mixed-methods research involves both qualitative and quantitative data collection and analysis.¹³ Mixed methods provide strong evidence for conclusions through the convergence and corroboration of qualitative and quantitative data.¹³

Design

This study uses a sequential exploratory design, in which data collection is in two sequential phases: qualitative building to quantitative. The sequential exploratory design is a mixed-methods approach to study a phenomenon within a small sample and generalize

qualitative findings to a larger population.¹³ For the first phase, we conducted in-depth interviews to explore managers' barriers and facilitators to supporting employee participation in wellness programs. Qualitative research is emergent and cannot be tightly prescribed, which makes it a suitable approach for studying a relatively unknown phenomenon.¹⁴ For the second phase, we created a survey instrument to collect quantitative data on managers' barriers and facilitators to supporting their employees' participation in the wellness program. The survey results assist in the interpretation of qualitative data and provide quantitative evidence to generalize findings from the study sample to the broader population.¹⁴ This study was determined exempt from review by the University of Washington Institutional Review Board (IRB).

Setting

The State of Washington employs several thousand employees representing a variety of job titles, income levels, and backgrounds. This study focuses on four Washington State agencies located in Tumwater and Olympia, Washington. The agencies cover several job descriptions and titles and range in size from 200 to 1,800 employees. Before initiating the mixed-methods study we interviewed the wellness coordinator, an individual whose job is to coordinate wellness programs and activities, at each agency (n=4 interviews total). The wellness coordinator interviews provided background information and context for our manager-interview guide (first phase) and survey (second phase). We discovered that the agencies have comprehensive wellness programs with onsite and online elements including an active wellness committee (see **Table 1** for an overview of the agencies' wellness programs).

Table 1. Elements of the employee wellness program at four agencies

<p>Staff and Resources</p>	<p>Wellness coordinator in charge of promotion and activities</p> <ul style="list-style-type: none"> ○ 50% FTE (1 agency with volunteer coordinator) <p>Volunteer wellness committee meets regularly to plan activities</p> <ul style="list-style-type: none"> ○ Committee includes managers and employees ○ Allowed time during work to meet <p>Allocated budget to support wellness programs and activities</p>
<p>Policy</p>	<p>Healthy-eating guidelines for events and meetings</p> <p>Tobacco use</p> <ul style="list-style-type: none"> ○ Employees can use tobacco on premises but not inside the building ○ Tobacco-free campus (1 agency only) <p>Scheduling</p> <ul style="list-style-type: none"> ○ Allowed time for onsite preventive services (e.g. flu shots, Mammo-van) ○ Allowed time for walking breaks and meetings <p>Telework policies (2 agencies only)</p>
<p>Communication and Promotion</p>	<p>Email messages about wellness programs and activities</p> <ul style="list-style-type: none"> ○ Monthly electronic newsletter ○ Upcoming activities <p>Signage to promote</p> <ul style="list-style-type: none"> ○ Healthy eating ○ Tobacco cessation ○ Walking and/or taking the stairs
<p>Onsite Activities</p>	<p>Physical activity</p> <ul style="list-style-type: none"> ○ Monthly physical activity challenges (e.g. “Couch to 5k”) ○ Provide walking maps to employees ○ Dedicated space for physical activity (2 agencies only) ○ Bicycle rack/cages (3 agencies only) <p>Healthy eating</p> <ul style="list-style-type: none"> ○ Healthy options are labeled in onsite cafeteria and/or vending machines ○ Educational seminars (e.g. Brown Bag meetings) ○ Drop site for community sponsored agriculture (CSA) <p>Employee stress management</p> <ul style="list-style-type: none"> ○ Promote employee assistance (EAP) mental health benefits <p>Link onsite activities to online component</p>
<p>Online Activities</p>	<p>Online platform for employees to:</p> <ul style="list-style-type: none"> ○ Complete wellbeing assessment ○ Track wellness activities for points ○ Earn an incentive (\$125) through wellness points

Sample

Eligible individuals were employed in a management-level position, whose job includes supervision of subordinates and/or responsibility for the performance and conduct of a subunit or group. We gathered qualitative and quantitative data from these managers between May and December 2016.

For the interviews, we worked with the agency's wellness coordinator to identify a small group of eligible managers that represented all levels of management (executive, middle, line). Approximately 5-6 managers at each agency were sent an email describing the study and interviews. We interviewed managers if they responded to the email.

For the survey, we worked with the agency's wellness coordinator to identify all eligible managers currently employed at the agency. An executive leader at each agency sent managers an email message that described the purpose of the survey and provided the survey link. Three reminders to complete the survey followed the initial email. We included survey responses from all managers responding to the survey.

Measures

Interview Guide. We created a manager-interview guide by conducting an integrative literature review (manuscript under review) and drawing on the wellness coordinator interviews for background. The manager-interview guide included questions about managers' attitudes and beliefs towards wellness programs, the organizational culture, and perceived role expectations regarding supporting the wellness program. Two trained researchers (K.H., D.G.P.) conducted 30-minute phone semi-structured interviews with managers over the telephone. Interviews were recorded with permission from each manager and sent to an experienced transcriptionist (Proof Positive Transcriptions, Garland, TX).

Survey Questionnaire. We developed the manager-survey instrument using words, concepts, and categories from the qualitative analysis to create questions, as well as drawing on the wellness coordinator interviews to provide context. The survey questions cover managers' roles and expectations regarding the wellness program, and the last question provided an optional comment box to write any thoughts managers had regarding the wellness program. The survey instrument was administered electronically using the online platform, Research Electronic Data Capture (REDCap), hosted by the Institute of Translational Health Sciences (ITHS) at the University of Washington.

Analysis

Interviews. We used thematic analysis to analyze the interview transcripts.¹⁵ Thematic analysis is a qualitative research methodology that uses inductive coding to analyzing interview data. Inductive coding is the process of breaking down qualitative data by assigning *codes* to actual statements or phrases from respondents.¹⁶ This approach generates *codes* and *themes* that are inductively derived from the data.¹⁶ We collated codes into groups of codes, or themes that have clear definitions. Through this process, we discovered two larger themes: Facilitators and Barriers. We compiled the groups of codes under these two larger themes. We reviewed and refined the themes to generate a “thematic narrative” of managers' facilitators and barriers to supporting their employees' participation. We used the constant comparative method of data analysis to judge topic saturation and theoretical complexity.¹⁴ This method compares emerging codes and themes from early transcripts and contrasts them from later transcripts. Qualitative validation strategies included triangulation of multiple data sources and “peer debriefing” sessions to check the credibility of the findings and interpretations.¹⁴ To ensure the dependability of results, two researchers independently coded transcripts and then came to consensus on the

codes and themes (D.G.P, K.H.). Qualitative findings are presented by facilitators and barriers, with associated themes and representative quotes.

Survey. The quantitative analysis used descriptive methods to summarize the survey findings. Our goal was to generate descriptive quantitative data on the phenomenon of interest, and not to make statistical inferences about group comparisons.¹⁷ The descriptive statistics include response frequencies (number and percentage), means, standard deviations, and basic demographic information on survey respondents (age, gender, job title, number of direct reports). We analyzed the 148 text comments provided by managers using a content analysis, which is a technique for evaluating text provided by participants.¹⁶ The survey results presented are by survey topic area with additional information from text comments. The survey analysis was conducted using Stata 14 (College Station, TX).

Results

First Phase: Qualitative Interviews

We present the interview findings from managers responding to the email invitation (23/23; 100%). The demographic characteristics of the managers interviewed are in **Table 2**.

Table 2. Interview demographics N=23, frequency (%)	
Gender	
Female	10 (43)
Male	13 (57)
Manager Role	
Line	10 (43)
Middle	8 (35)
Executive	5 (22)
Number of Direct Reports	
1-5	6 (26)
6-10	11 (48)
11-20	6 (26)

Facilitators

Managers described several facilitators to supporting their employees' participation in wellness programs. They include: 1) awareness of wellness activities and resources, 2) regular communications from the wellness program, 3) supportive culture, 4) perceived benefits of providing wellness programs, 5) employees' view of the wellness program, 6) role expectations, 7) role-modeling, 8) comfort in talking about wellness, 9) awareness of the agency's policies (regarding participation), and 10) scheduling flexibility. We provide a summary of each facilitator, with associated quotes, and identify the speaker as an executive, middle, or line manager.

Awareness of Wellness Activities and Resources. All the managers are aware of the wellness activities and resources available within their agency. Some managers reported that they participated in activities in the past or still participate. *"We have a library of materials that are available to folks through the wellness program, and we do sponsor things like flu shot programs and other kinds of wellness activities onsite."* - Middle

Regular Communications. All the managers receive regular communications from their agency's wellness coordinator or related staff via e-mail and postings on the intranet website. For the most part, managers rely on wellness coordinators or related staff to send out reminders and promotional materials to their employees.

Supportive Culture. Most managers feel their agency supports a culture of wellness among its employees. Managers describe several ways their agency creates a culture of wellness among employees; these include the allocation of money, staff time, and active promotion through e-mails, employee intranet, posters/signage, and announcements in staff meetings and all-staff broadcasts.

Perceived Benefits of the Wellness Program. All the managers believe that wellness programs are beneficial to employees. Managers describe several benefits of offering wellness programs to employees; these include lower stress and burnout, increased productivity, lower health care costs, and less absenteeism.

Employees' View of the Wellness Program. Most of the managers believe employees appreciate that the wellness program exists and view it as a positive resource. *“Overall, I think that the employees of the agency are engaged and like the activities.” - Executive*

Role Expectations. Several managers said they feel expected to encourage, support, and be flexible with employees' participation in wellness activities. *“I think the manager's role is to make sure that they know about the opportunities and the value, and to make sure that they know they have the time to do it if they want to participate.” - Middle*

Role-Modeling. In general, managers see themselves as a role model for their employees. *“it's just the power of being a role model and saying that you care about wellness and that you're participating in the activities.” - Line*

Comfortable Talking About Wellness. Most managers feel comfortable talking and sharing information with employees about wellness. A few managers discuss wellness with employees by using formal channels, such as office meetings, or as part of the new employee orientation process.

Awareness of Agency Policies. Several managers are aware of a written policy regarding employee participation in the wellness program. *“They're written in the agency policies. I would say in general that they encourage staff to participate, and they encourage managers to enable the participation of staff.” - Line*

Scheduling Flexibility. Several managers perceive having flexibility with their employees' schedules. They describe balancing workload to accommodate participation. *"I mean at the most practical level it's about making space and time for people to do these things."* –
Line

Barriers

Managers described several barriers to supporting their employees' participation in wellness programs. They include: 1) challenges with wellness activities and resources, 2) generic messaging, 3) the culture surrounding wellness is not integral to all agencies, 4) perceived lack of employee buy-in, 5) lack of formal expectations, 6) lack of self-efficacy to engage employees, 7) lack of supportive messages from manager above, 8) lack of awareness of agency policies (regarding participation), 9) scheduling inflexibility, and 10) workload. We provide a summary of the barriers with associated quotes.

Challenges with Wellness Activities and Resources. Many managers describe challenges with navigating online components of the wellness program and feel the incentive to track wellness activities is not worth the time and effort. *"I want it to be user-friendly... I don't want to go hunting, picking, searching — it's kind of a labyrinth without a map. Well, then I'm done."*
- *Middle*

Generic Messaging. Managers receive the same wellness communications as employees, but for some managers, this is not enough. *"There are those messages that we get, but I don't feel like it's a targeted message."* - *Middle*

Culture Surrounding Wellness is Not Integral to All Agencies. A small number of managers perceive areas within their organization as having a supportive culture but feel it may

not be widespread. *“It’s like these gung-ho messages from the director and all this stuff, but then the opportunities are not provided as part of just daily life to participate in things”* - Middle

Perceived Lack of Employee Buy-in. Some managers perceive a lack of employee support or buy-in for the wellness program. Several managers describe employees’ view of the wellness program as mixed. *“It depends on the staff. I definitely have staff that are heavily involved and other staff that aren't involved”* - Middle

Lack of Formal Role Expectations. Managers, for the most part, did not feel they had a formal obligation to take an active role in the wellness program. *“There has never been an expectation or direction that I can recall where I’ve been told that it’s part of my expectations that I talk about the wellness program.”* - Executive

Lack of Self-Efficacy to Engage Employees. Some managers feel their role in the wellness program is not an important factor in employees’ participation. *“I think that the employee — the want from the employee themselves — I think it is more than anything I would be able to do as a supervisor.”* - Line

Lack of Supportive Messages from Manager Above. Many of the managers describe not receiving messages of support from their own manager. *“I don't know that I receive many messages from her at all really, you know?”* – Line

Unaware of Agency Policies. Several managers are not aware of a written policy regarding employees’ participation. Managers most often describe the policy as voluntary participation. *“It’s not a required thing and to my knowledge, there is no policy around it.”* - Line

Scheduling Inflexibility. Overall, managers feel they can support employee participation, but only as far as scheduling permits. *“...it gets a little bit harder for folks who have production-related work, and so in our agency that’s like ... the folks that work in the call centers.”* - Line

Workload. Managers describe workload as a barrier to supporting their employees' participation, as well as their own participation. "Even though we're officially allotted time to participate...I think that's wonderful, but for the people like me that tend to be in meetings all day it's challenging...I think it's known that we're understaffed in certain areas, or that we have more work than we can do...." - Middle

At the end of the interview, we asked each manager to describe any additional resources that would help them support their employees' participation. Responses included having snippets of scientific data to help facilitate conversations with employees, guest speakers to talk about wellness topics with employees, and wellness trainings for all employees to attend.

Second Phase: Quantitative Survey

We included survey responses from all managers responding to the survey (607/935; 65% response rate). Of the 607 responding to the survey, 598 (98%) responded to demographic questions, and 547 (90%) provided information on their age, gender, job title, and number of direct reports. The demographic characteristics of the managers surveyed are in **Table 3**. In addition, 148 (24%) of managers provided additional thoughts in the optional comment box.

Table 3. Survey demographics N=598, frequency (%)	
Age	
18-34	23 (5)
35-44	115 (19)
45-54	213 (36)
55-65	199 (33)
65+	19 (3)
Prefer Not Answer	29 (5)
Gender	
Male	233 (39)
Female	334 (56)
Prefer Not Answer	29 (5)
Manager Roles	
Line	302 (51)
Middle	189 (32)
Executive	56 (9)
Prefer Not Answer	51 (8)
Number of Direct Reports	
1-5	245 (41)
6-10	184 (31)
11-20	72 (12)
21-50	36 (7)
51+	28 (5)
Prefer Not Answer	27 (4)

The quantitative survey results are provided by topic area with the percentage of managers responding positively (“Agree” or “Strongly Agree”) to the question. The main topic areas were identified from the interview findings and include: 1) agency culture, 2) scheduling and workload, 3) communication, 4) encouragement, 5) policies, and 6) training. We provide a narrative summary of the survey results, and describe the text comments provided by managers, as applicable. The summary of survey responses overall and by job title is in **Table 4**.

Table 4. Summary of survey responses by overall and job title, response frequencies, mean, and standard deviations

	Mean ± sd	Percent responding, “Strongly agree” or “Agree”			
		Overall N=607	Executive* N=56	Middle* N=189	Line* N=302
1. I read the monthly communications from my agency about wellness programs and activities.	3.7 ± 1.1	67	79	69	68
2. I share information about the agency’s wellness efforts with my employees.	3.5 ± 1.2	54	59	54	56
3. I encourage my employees’ personal wellness efforts.	4.1 ± 0.8	82	96	84	80
4. I receive training on employee wellness as part of my job.	2.6 ± 1.3	17	20	17	18
5. My employees’ workload allows them to participate in wellness activities.	3.4 ± 1.2	55	66	58	55
6. I am flexible with my employees’ work schedules to encourage participation in wellness activities.	4.2 ± 0.9	85	91	89	85
7. My agency’s policies support employee participation in wellness activities.	4.0 ± 0.9	77	86	82	75
8. My agency’s culture supports employee wellness.	3.9 ± 1.0	75	85	77	77
9. My agency expects me to support my employees’ participation in wellness activities.	3.8 ± 1.0	69	84	72	68
10. I am a positive wellness role model for my employees.	3.6 ± 1.0	54	69	58	51
11. My supervisor encourages my personal wellness efforts.	3.5 ± 1.1	51	74	35	47

*Of the 547 managers that provided job title
Coded 1= “Strongly Disagree” to 5= “Strongly Agree”

Agency Culture. Most managers (75%) believe their agency's culture supports employee wellness, and most (69%) report they have an expectation to support employee participation. Half the managers (54%) believe they are personally a positive role model for wellness. More executives (84%) felt an expectation to support employee participation than did middle (72%) or line (68%) managers.

Scheduling and Workload. Managers, for the most part, believe they are flexible with employees' work schedules to encourage participation in the wellness program (85%). About half the managers (55%) believe their employees' workload allows them time to participate. In the text comments, managers cited workload and schedule as the biggest barriers to their employees' participation, as well as their own participation.

Communication. Two-thirds of the managers (67%) read the monthly communications from the wellness program, and about half (54%) share information about their agency's wellness efforts with their employees.

Encouragement. Overall managers (82%) believe they encourage their employees' personal wellness efforts, and half of them (51%) report their own supervisors encourage their wellness efforts. Fewer middle (35%) and line (47%) managers than executives (75%) report their own supervisor encourages their wellness efforts.

Policies. Overall, managers (77%) believe their agency's policies support employees' participation in the wellness program. Managers' comments suggest making policies consistent and visible across the agency, such as policies that detail how much time employees are provided to participate.

Training. Only a small percentage of managers (17%) indicate they receive training on employee wellness as part of their job. The lack of training was reported by survey respondents at every level of management (executive, middle, and line).

Discussion

Our findings suggest that managers support their employees' wellness efforts and try to accommodate participation in wellness activities, but they also face barriers to supporting their employees' participation. In our interviews, we found that managers are supportive of their agency's wellness program and perceive many benefits to offering wellness activities and resources to employees. Similarly, on the surveys managers reported that they their agency's policies support participation in wellness activities, and they feel expected to support their employees' wellness efforts. In the interviews, managers described employee buy-in as key to employee participation, but also emphasize the importance of serving as a role model for their employees. We found from interviews that managers did not view their own manager as a wellness role model for them, and on the surveys only about half report that they receive encouragement from their direct supervisor. The interviews and surveys suggest that managers value the regular communications they receive regarding the wellness program, but would welcome more targeted messages. The interviews and surveys found that managers experience a supportive culture at their agency, but they also report difficulties accommodating participation due to inflexibility of schedules and heavy workload. The most notable of our findings was the lack of training on wellness. We found in the interviews that some managers were unaware of the wellness program policies, and fewer of them felt a formal expectation to support the

wellness program. The survey findings corroborated the interviews, as very few managers reported they had received training on the wellness program.

Our findings build on previous research by using mixed methods to understand managers' perspectives about their role in supporting employee participation in wellness programs. One qualitative study with human resource managers found that while most managers believed worksite health promotion was important, many pointed to barriers such as cost, time, logistical challenges, and unsupportive culture.¹² Though we found differences among executive, middle, and line managers, our findings suggest that workload and scheduling are barriers. Previous research from health care systems suggests several factors influence middle managers' support for intervention implementation, including policies, resources, role overload, leadership support, and organizational culture.¹⁷ Similarly, we found that role expectations, awareness of policies, and a supportive culture are facilitators for managers' support for wellness programs. Previous research suggests executive leaders' support has a direct effect on middle managers' commitment.¹⁸ We found differences in the level of support reported by executives, middle, and line managers. For example, three-quarters of executives and one-third of middle managers reported that their supervisor encourages their wellness efforts. We found that not all the managers felt expected to support wellness programs, which suggest that there may be inconsistent messaging or understanding around managers' expectations. The most striking finding for this study was the lack of training. We found that most managers had not received training on the employee wellness program.

Limitations and Strengths

Mixed methods research has the same limitations as qualitative and quantitative research. The telephone interviews and online surveys rely on self-reported data from participants. Another limitation is the generalizability of the survey instrument to populations outside the Washington State agencies; however, it may be applicable to the wider network of State agencies. Washington is a large employer with over 63,000 employees (excluding higher education) and hundreds of office locations around the State. The strengths of using mixed-methods research include the ability to provide stronger evidence through the corroboration of findings.¹⁹ Another strength of this study is that the findings are grounded in the managers' experiences. Mixed methods provide more in-depth knowledge of the views managers have regarding wellness programs. The findings are more robust with quantitative data supporting the qualitative findings. For example, we corroborated interview findings with survey results to draw conclusions about the lack of targeted messaging and training.

Implications for Practice

Wellness programs are not implemented in a vacuum. All managers need training on how to support the wellness program and activities. Training can increase managers' awareness of wellness policies, expectations, and the provision of training is an indication of leadership's commitment to the wellness program. Executive leaders should receive additional training on the allocation of resources to facilitate middle and line managers' support for the wellness program. Executive leaders should encourage and support middle and line managers' participation in wellness programs. The values, attitudes, and behaviors that are committed to the agency's

wellness efforts define the culture surrounding wellness. Managers need targeted messages from the wellness program, like talking points they can use to encourage employees' wellness efforts.

Conclusions

Our findings suggest managers are supportive of wellness programs but may fail to accommodate employees' participation due to workload, scheduling inflexibility, perceived self-efficacy, and lack of formal expectations or training. The strategies we provide may help engage managers at all levels to take a more active role in supporting employees' participation in wellness programs. Future research will need to test and evaluate strategies that engage managers to support wellness programs.

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Chapter 4

Is Managers' Support for Wellness Associated with Employees' Engagement at Work?

Abstract

This is an exploratory analysis of the direct and indirect associations between managers' support for wellness (tangible actions to support employees' participation in wellness programs at work) and employees' engagement at work. We used a path analysis, guided by the Social Exchange Theory and employee engagement literature, to analyze employee survey data from two Washington State agencies. Managers' support for wellness is indirectly associated with employees' engagement at work, and directly associated with employees' perception of agency support for health and respect and feedback. The results suggest that managers' support for employees' wellness efforts may indirectly benefit employees' engagement at work.

Employees devote more resources to their job performance if their organization is invested in and committed to them.¹ Organizations commit to their employees through investments in organizational social networks and resources to support work-related performance.² In exchange, employees invest in their work and take positive actions to further their organization's interests and goals.³ Employees are more likely to devote more cognitive, emotional, and physical resources to perform their job duties if the organization provides social (interrelationships) and economic (tangible) resources.⁴ Employees are more likely to disengage themselves from their roles when their organization fails to provide resources.¹ Disengaged employees feel less valued by their employer and are less involved with their work.⁵

The level of employees' engagement at work depends on the organizational climate and employees' relationship with their direct supervisor.⁶ The *organizational climate* refers to the properties of the organization's environment, such as the organizational structure, policies, management practices, and social network characteristics.⁷ The organizational climate is associated with employees' well-being at work.⁸ The climate of an organization precedes the *organizational culture*, which is the collective values, beliefs, and norms that influence the behaviors of individuals within an organization.⁹ Managers and supervisors (henceforth managers) influence the climate and culture through their behaviors and practices.⁷ For instance, managers transmit the organizational culture through their daily and ongoing interactions with employees.¹⁰ Positive social exchanges between managers and employees are related to employees' work-related behaviors and attitudes.¹¹

Wellness programs are one example of a tangible organizational investment in employees' health and well-being. Comprehensive wellness programs are coordinated strategies that include programs, policies, benefits, environmental supports, and links to the surrounding

community, that are designed to promote the health and well-being of employees.¹² Successful wellness programs are built on organizational cultures that support employees' participation in wellness activities.¹³ For example, leadership support for wellness programs mediates the relationship between the provision of wellness programs and employees' well-being.¹⁴ Employees view the provision of wellness programs as a sign their employer values and cares about them.¹⁵

Employees' perception that their manager values their contributions and cares about their well-being is important for retaining talent.¹⁶ The perception of managers' support increases employees' commitment to the organization and reduces their intention to quit.¹⁷ Management practices and behaviors are associated with employees' engagement and well-being at work.¹⁸ For this study, we define managers' support for wellness as the (perceived) actions that managers take to support employees' wellness at work. Managers' actions include encouraging their employees to participate in wellness activities, making employee workloads conducive to participation, sending wellness-related messages, and acting as a role model for the wellness program ("walking the talk").

The objectives of this study are 1) to introduce the concept of *managers' support for wellness*, 2) present descriptive data about employees' perception that their manager supports their wellness, and 3) examine the associations between the perception of managers' support for wellness and employees' engagement at work. We expect that the perception of manager support will have direct and indirect associations with employees' engagement via several pathways. Wellness programs are an organizational investment in employees' health and well-being, and employees view the provision of wellness programs as a sign that their employer values and cares about them.

Data and Methods

Study Design and Setting

This is a cross-sectional study using data from the 2016 Washington State Employee Engagement Survey (EES). The EES is administered annually to State employees in executive branch agencies. We received permission from a State-level leader to analyze de-identified data from two executive branch agencies located in the greater Olympia area. The agencies have robust wellness programs with online and onsite components (see **Table 1** for the characteristics of the wellness programs). Washington is one of the largest employers in the State with over 63,000 employees, excluding higher education. In 2013, the Governor of Washington State, Jay Inslee, released an executive order (EO 13-06) to improve the health and productivity of State employees. Washington State has since expanded its wellness program to provide wellness assistance to all State agencies, incorporated wellness into health insurance plans, and required state agencies to develop and implement healthy eating guidelines.

Table 1. Wellness-program components at the two participating Washington State agencies

Component	Description
Policy	Wellness coordinator in charge of promotion and activities <ul style="list-style-type: none"> ○ 50% FTE Volunteer wellness committee meets regularly to plan activities <ul style="list-style-type: none"> ○ Committee includes managers and employees ○ Allowed time during work to meet Allocated budget to support wellness programs and activities
Communications and Promotion	Email messages about wellness programs and activities <ul style="list-style-type: none"> ○ Monthly electronic newsletter ○ Upcoming activities Signage to promote <ul style="list-style-type: none"> ○ Healthy eating ○ Tobacco cessation ○ Walking and/or taking the stairs
Onsite component	Physical activity <ul style="list-style-type: none"> ○ Monthly physical activity challenges (e.g. “Couch to 5k”) ○ Provide walking maps to employees ○ Dedicated space for physical activity ○ Bicycle rack/cages Healthy eating <ul style="list-style-type: none"> ○ Healthy options are labeled in onsite cafeteria and/or vending machines ○ Educational seminars (e.g. Brown Bag meetings) ○ Drop site for community sponsored agriculture (CSA) Employee stress management <ul style="list-style-type: none"> ○ Employee assistance (EAP) mental health benefits
Online component	Online platform for employees to: <ul style="list-style-type: none"> ○ Complete wellbeing assessment ○ Track wellness activities for points

Participants

The 2016 EES was open from October 4 to November 1, 2016. Our sample includes employees responding to the 2016 EES (N= 2,122 out of a possible 2,890; 74% response rate). The EES was available in English, and all employees at the agency are invited to respond, regardless of job title or salary level.

Measures and Variables

The EES is composed of employee-perception questions about engagement, customer orientation, respect and feedback, job satisfaction, and the perception of agency support for health. The questions were developed specifically for Washington State agencies to measure key workforce management practices. In addition, every agency has the option to add questions to their specific EES. The questions are answered using a 5-point Likert scale ranging from “Always/Almost always” to “Never/Almost never”. The reliability of scale items was assessed by the internal consistency (alpha coefficient).

Perceived Manager Support for Wellness. We worked with the two Washington State agencies to include an additional subscale in their EES. The 4-item subscale measures employees’ perception their manager supports participation in wellness activities and is a role model for wellness. The items are summed together and range from 0 to 16. The subscale has acceptable reliability (alpha=0.85).

Agency Support for Health. The perception of agency support for health was measured using one item, “Overall, my agency supports me in living a healthier life.”

Job Satisfaction. Employees' job satisfaction was measured using one item, "In general, I'm satisfied with my job." Previous research suggests that job satisfaction can be reliably measured using one item (Scarpello & Campbell, 1983).

Respect and Feedback. The perception of respect and feedback was measured using a 3-item subscale that asks employees about recognition at work, and respect and feedback received from direct supervisors. The items are summed together and range from 0 to 12. The subscale has acceptable reliability ($\alpha=0.82$).

Employee Engagement. Employees' engagement at work was measured using a 5-item subscale that asks about employees' ability to have input on decisions, opportunity to learn and grow, and encouragement to innovate. The items are summed together and range from 0 to 20. The subscale has acceptable reliability ($\alpha=0.85$).

Customer Orientation. Employees' customer orientation was measured using a 2-item subscale that asks about their perception that the agency makes improvements for customers and improves work processes for customers. The items are summed together and range from 0 to 8. The subscale has acceptable reliability ($\alpha=0.78$).

Conceptual Model and Hypotheses

The proposed relationships between managers' support for wellness and employee engagement are based on the Social Exchange Theory (SET) and previous employee engagement research. The SET is a widely accepted theoretical explanation for employee engagement.¹⁹ According to SET, employees' voluntary actions are motivated by the exchange of economic and social resources within their organization.²⁰ One example is the exchange between job resources provided by the organization and employees' engagement at work.²¹ Previous research suggests

that several factors are antecedent to employees' engagement at work, including perceived organizational support, perceived supervisor support, rewards and recognition, and procedural justice.¹ Our hypothesized direct and indirect associations between the perception of manager support and employee engagement are described below and presented in **Figure 1**.

Figure 1. Conceptual model depicting the hypothesized pathways. The dashed lines represent the indirect associations from managers' support for wellness to employees' engagement at work.



Note: Direct associations are when a single-head arrow connects one variable to another variable. Indirect associations are when the path connects one variable to another variable which connects to a third variable.

Agency Support for Health. The perception of organizational support has a positive influence on employees' job satisfaction and commitment.²² Furthermore, perceived organizational and supervisor support is positively associated with employees' work engagement.²³ We hypothesize that managers' support for employees' wellness is 1a) directly associated with employees' perception of agency support, 1b) indirectly associated with employees' engagement through the perception of agency support, and 1c) indirectly associated

with employees' engagement through the perception of agency support and job satisfaction. Agency support for health is 1d) directly associated with employees' engagement and 1e) directly associated with job satisfaction.

Job Satisfaction. The perception of supervisor support is associated with employees' performance, job satisfaction, and commitment.²⁴ The practices and behaviors of managers influence employees' effort, job performance, and job satisfaction.¹¹ We hypothesize that managers' support for employees' wellness is 2a) directly associated with employees' job satisfaction, and 2b) indirectly associated with employees' engagement through job satisfaction. Employees' job satisfaction is 2c) directly associated with their engagement.

Respect and Feedback. The level of respect and support from direct supervisors is associated with employees' engagement at work.²⁵ Previous research suggests that respect and constructive feedback provided by managers can influence employees' job satisfaction and performance.²⁶ Employees are more motivated when they receive constructive feedback from their supervisor.²⁷ We hypothesize that managers' support for wellness is 3a) directly associated with employees' perception of respect and feedback, 3b) indirectly associated with employees' engagement through respect and feedback, and 3c) indirectly associated with employees' engagement through respect and feedback, and job satisfaction. The perception of respect and feedback is 3d) directly associated with employees' engagement and 3e) directly associated with job satisfaction.

Employee Engagement. Employees who believe their organization cares about them and values their contribution are more likely to have higher involvement in their work.²⁸ Previous research suggests that employee engagement mediates the relationship between organizational support and commitment to work.²⁹ Providing job resources, such as supportive supervision, is

associated with higher work engagement.³⁰ We hypothesize that 4a) managers' support for wellness is directly associated with employees' engagement, and 4b) employees' engagement is directly associated with their customer orientation.

Customer Orientation. Customer orientation is included to examine how the two variables of interest (manager's support for wellness, employees' engagement at work) are associated with employees' perceived orientation toward customer value. Employees' engagement is related to an organization's performance outcomes, including workforce productivity and retention, profitability, growth, and customer satisfaction.³¹ Employees' orientation toward customers is a strategy-focused attitude that is distinct from engagement. Employees' attitudes towards an organization's customer service strategy has implications for an organization's performance. For example, organizational resources and employees' work engagement are associated with employees' performance and customer loyalty.³² We hypothesize that managers' support for employees' wellness is 5a) directly associated with employees' customer orientation and 5b) indirectly associated with customer orientation through employees' engagement.

Statistical Analysis

We used descriptive statistics to summarize the survey data, and a path analysis to analyze the proposed relationships. The descriptive statistics include means, standard deviations, and percent positive responses on the EES subscales. The path analysis was used to examine the direct and indirect associations between managers' support for wellness and employee engagement. A path analysis is a convenient way to present theories about how observed variables are interrelated. The path analysis is an extension of multiple linear regression that

decomposes the effects (associations) of related variables.³³ The relationships between variables are specified using directed lines, or paths. The estimated path coefficients are standardized beta coefficients showing the direct association of one variable on another.³³ For example, a single-head arrow connecting one variable to another is a direct association. Indirect associations are when the path connects one variable to another variable which connects to a third variable, i.e. mediating variables. The indirect associations are calculated by multiplying the path coefficients in the directional relationship between two or more variables.³³ The total association is the sum of direct and indirect associations. The magnitude of the path coefficients is classified by small (<0.15), moderate (0.16 to 0.49), or large (>0.50) associations.³⁴

The EES has missing data (87% complete case), which we assume to be missing completely at random. We used structural equation modeling (SEM) with full information maximum likelihood (FIML) estimation to handle missing values. The FIML is an adjusted likelihood function that allows each case to contribute information on observed variables.³⁵ We used a bootstrap program to estimate the standard errors and confidence intervals for the indirect associations. We used two goodness-of fit tests to assess the fit and acceptability of the model. These include the Comparative Fit Index and the Tucker-Lewis Index, where a value greater than 0.95 is desirable.³⁶ The statistical analysis was performed using STATA 14.0 (College Station, Texas).

Results

Descriptive Survey Responses

The means, standard deviations, and percent positive responses to the EES are in **Table 2**. One-third of the employees believe their manager encourages their participation in wellness

activities and receive communications about wellness activities from their manager. Half the employees believe their workload allows them to participate in wellness activities and see their manager as a positive role model for wellness. Most employees believe their agency supports their health and are satisfied with their job. The majority of employees believe their supervisor respects them and provides feedback that helps their performance. The employees, for the most part, are engaged at work. Most employees believe the agency makes improvements for customers and fewer believe the agency uses customer feedback to improve work processes.

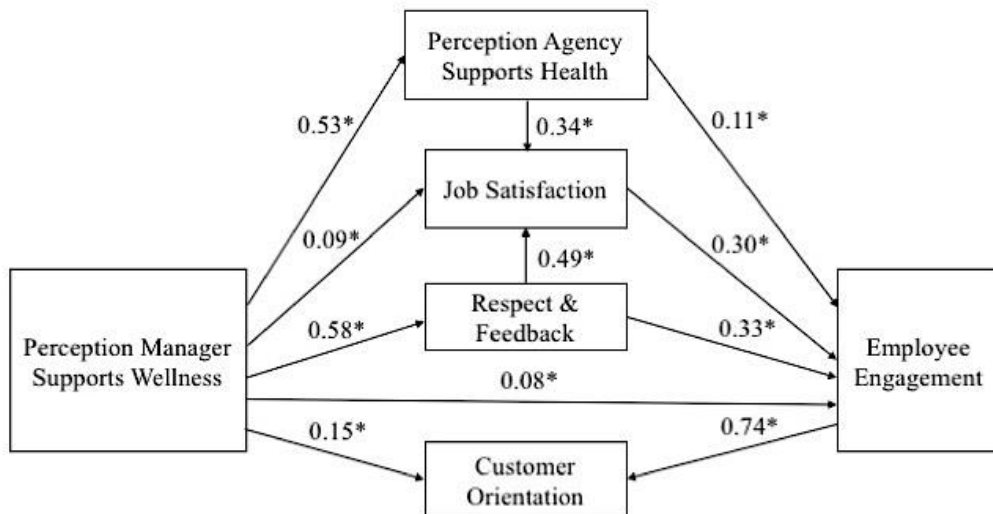
Table 2. Employee Engagement Survey questions, positive responses, and means and standard deviations for employees at two Washington State agencies

Scale name (score range)	Positive Responses* %	Mean ± sd
Manager Support (0-16)		8.1 ± 4.5
1. My manager encourages me to participate in my agency’s wellness activities.	35	2.0 ± 1.5
2. My work schedule allows me to participate in wellness activities.	44	1.7 ± 1.5
3. I receive communications from my manager about wellness activities.	30	1.8 ± 1.4
4. My manager is a positive role model for wellness.	51	2.2 ± 1.3
Agency Support (0-4)		
1. Overall, my agency supports me in living a healthier life.	78	3.1 ± 0.9
Job Satisfaction (0-4)		
1. In general, I’m satisfied with my job.	75	2.9 ± 1.0
Respect & Feedback (0-12)		
1. My supervisor treats me with dignity and respect.	88	3.5 ± 0.94
2. My supervisor gives me ongoing feedback that helps me improve my performance.	71	3.0 ± 1.1
3. I receive recognition for a job well done.	60	2.7 ± 1.2
Employee Engagement (0-20)		14.6 ± 4.2
1. I have the opportunity to give input on decisions affecting my work.	64	2.7 ± 1.0
2. I know how my work contributes to the goals of my agency.	86	3.3 ± 0.87
3. I have opportunities at work to learn and grow.	65	2.7 ± 1.1
4. A spirit of cooperation and teamwork exists in my workgroup.	77	3.0 ± 1.0
5. I am encouraged to come up with better ways of doing things.	63	2.7 ± 1.1
Customer Orientation (0-8)		5.3 ± 1.9
1. We are making improvements to make things better for our customers.	73	2.9 ± 0.98
2. We use customer feedback to improve our work processes.	50	2.4 ± 1.1
*The percent responding, “Almost always/Always” or “Usually” to the EES survey in 2016, denominator N= 2,122. sd= standard deviation The EES scales range from 1 = “Never/Almost never” and 5 = “Always/Almost always”		

Path Analysis

The direct path coefficients are provided in **Figure 2**, and described in terms of associations in the text. There is a moderate total association between managers’ support for wellness and employees’ engagement at work. The total association between managers’ support for wellness and employees’ engagement at work is six times greater than the direct association. The total association between managers’ support for wellness and engagement at work is 84% indirect. The fit statistics indicate that the path analysis is plausible (Comparative Fit Index = 0.96; Tucker-Lewis Index = 0.84).

Figure 2. Estimated coefficients for all direct associations between variables, *p<0.001.



Direct Associations

The direct associations and corresponding hypotheses are provided in **Table 3**. Managers’ support for wellness has a large association with agency support for health and respect and feedback. However, managers’ support for wellness has small associations with

employees' job satisfaction, engagement at work, and customer orientation. Agency support for health has a moderate association with job satisfaction and a small association with employees' engagement at work. Employees' job satisfaction has a moderate association with engagement at work. Employees' perception of respect and feedback has moderate associations with employees' jobs satisfaction and engagement at work. Employees' engagement at work has a large association with customer orientation.

Table 3. The estimated associations from the direct pathways.

Agency Support for Health	β	s.e.	95% CI
1a) Manager Support for Wellness	0.53	0.02	0.48, 0.57
Job Satisfaction	β	s.e.	95% CI
2a) Manager Support for Wellness	0.09	0.023	0.04, 0.13
3e) Respect & Feedback	0.49	0.022	0.44, 0.53
1e) Agency Support for Health	0.34	0.018	0.30, 0.37
Respect & Feedback	β	s.e.	95% CI
3a) Manager Support for Wellness	0.58	0.019	0.54, 0.61
Employee Engagement	β	s.e.	95% CI
4a) Manager Support for Wellness	0.08	0.009	0.05, 0.11
3d) Respect & Feedback	0.33	0.015	0.30, 0.36
1d) Agency Support for Health	0.11	0.012	0.09, 0.13
2c) Job Satisfaction	0.30	0.013	0.27, 0.33
Customer Orientation	β	s.e.	95% CI
5a) Manager Support for Wellness	0.15	0.019	0.11, 0.18
4b) Employee Engagement	0.74	0.020	0.70, 0.77
β = standardized beta coefficients, mean=0, standard deviation=1			
s.e. = standard error; 95% CI = 95% confidence interval			
All beta coefficients (β) are statistically significant, $p < 0.001$			

Indirect Associations

The indirect associations and corresponding hypotheses are provided in **Table 4**. The total indirect associations from managers' support for wellness to employees' engagement at work is moderate (0.42). Managers' support for wellness has a small association with employees' engagement via the perception of agency support for health, and agency support and

job satisfaction. There is a small association between managers' support and employees' engagement through job satisfaction. Managers' support for wellness has a moderate association with employees' engagement through respect and feedback, and through respect and feedback and job satisfaction. There is a small association between manager's support and employees' customer orientation through employees' engagement.

Table 4. The estimated associations from the indirect pathways.

Employee Engagement	β	s.e.	95% CI
1b) Manager Support for Wellness → Agency Support for Health → Employee Engagement	0.060	0.008	0.04, 0.07
1c) Manager Support for Wellness → Agency Support → Job Satisfaction → Employee Engagement	0.055	0.005	0.04, 0.06
2b) Manager Support for Wellness → Job Satisfaction → Employee Engagement	0.028	0.007	0.01, 0.04
3b) Manager Support for Wellness → Respect & Feedback → Employee Engagement	0.195	0.012	0.17, 0.22
3c) Manager Support for Wellness → Respect & Feedback → Job Satisfaction → Employee Engagement	0.086	0.007	0.07, 0.10
Total indirect association:	0.426		
Customer Orientation	β	s.e.	95% CI
(5b) Manager Support for Wellness → Employee Engagement → Customer Orientation	0.060	0.010	0.03, 0.08
β = standardized beta coefficients, mean=0, standard deviation=1 s.e. = standard error; 95% CI = 95% confidence interval All beta coefficients (β) are statistically significant, p<0.001 Proportion of managers' support for wellness that is mediated = 0.426/ 0.506 = 84% Ratio of total effect to direct effects: 0.506/0.082 = 6.1			

Discussion

Our exploratory path analysis provides insight into the associations between managers' support for wellness and employees' engagement. We found that the majority of the association between managers' support for wellness to employees' engagement was indirect. However, the perception of managers' support had large associations with employees' perception of agency support for health and respect and feedback. Our findings suggest that the majority of the

relationship between managers' support for wellness and employees' engagement is mediated by other variables.

To our knowledge, this study is one of the first to examine the relationship between managers' support for wellness and employees' engagement at work. Visible support for employees' wellness efforts in the workplace is one way for managers to invest in and commit to their employees. The employees in this study reported lower levels of perceived manager support for wellness, compared to other measures on the EES. For example, one-third of employees' report that their manager encourages their participation in wellness activities. Managers should take a more active role in supporting their employees' wellness efforts. We found a moderate indirect relationship between managers' support for wellness and employees' engagement at work. Employees' engagement is motivated by the exchange of economic and social resources within their organization.²⁰ Our findings indicate that managers' support for employees' wellness is related to employees' perception of agency support for health. This is consistent with previous research suggesting managers influence the organizational climate and culture.⁷

Limitations and Strengths

This study has several limitations. The EES does not include individually-linked demographic data, and there may be unmeasured confounding. For example, the sample only includes employees choosing to respond to the EES and we do not know the circumstances in which employees responded to the survey. There are environmental factors that may have influenced the way employees responded, such as a 1.8% wage increase approved for State employees and expectations for agencies to foster Lean cultural transformation by making improvements to work process and encouraging employees' input and innovation.³⁸ We cannot

draw causal inference from the path analysis. The path analysis assumes a unidirectional relationship between variables. It is possible there are bidirectional relationships between the variables presented.

Despite the limitations, there are several strengths of this study. The sample size from the two agencies was large (>2,000 observations) and the survey response rate exceeded 70% , without the use of incentives. There are survey processes that may influence employees' response rate, for example, increased agency communications about survey administration and improvements to survey accessibility for field or swing-shift employees.³⁸ We did not use a previously published measure for employee engagement, e.g. Utrecht Work Engagement Scale.³⁹ However, our measure of employees' engagement is routinely collected by State agencies and benchmarked for improvement. In this way, we can bridge the academic approach and the practical application and utility of employee engagement research.⁴ The path analysis is a powerful and flexible technique to model the relationships between measured variables.

Conclusions

Employees' perception of managers' support for wellness had positive total associations with employees' engagement at work, the perception of agency support for health, the perception of respect and feedback, job satisfaction, and perceived customer orientation. We found that the perception of managers' support for wellness (tangible actions to support employees' participation in wellness programs at work) was indirectly associated to employees' engagement. Our findings suggest that managers' support for wellness may act on employees' engagement through mediating variables, such as perceived agency support for health and perceived respect and feedback. Employers should consider how supporting employees' participation in wellness

could benefit the organization. Researchers and practitioners implementing strategies to boost managers' support for wellness may indirectly benefit employees' engagement work. Future research is needed to understand the causal pathways between the perception of managers' support for wellness and employees' engagement at work. Supporting wellness programs is an investment in employees' health and well-being, and exchange of tangible resources within the organization.

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Chapter 5

Conclusions

The three studies from this dissertation contribute to the existing workplace health promotion literature by establishing the reliability and validity of an instrument to measure employees' perception of workplace support for health, identifying strategies to engage managers and supervisors to support employees' participation in wellness programs, and providing exploratory evidence of the association between managers' support for employees' wellness and employees' engagement at work. We found that employees are aware of the support for health that they receive in the workplace, and it can change according to what the employer is implementing. Our findings suggest that strategies, such as formal expectations to support participation and training on the wellness program, may boost managers' support for wellness. Finally, we found that perceived support for employees' wellness efforts has positive benefits for employees' engagement at work.

Summary of Findings

Aim 1: The five-item Workplace Support for Health scale is a reliable and valid measure of employees' perception of support for health at the worksite. The scale was reliable and stable over each time point, detected change in employees' perceptions, and demonstrated concurrent validity among a population of small workplace employees. The scale can provide insight into employees' perceptions that their workplace supports a healthy lifestyle for employees.

Aim 2: We found that managers are supportive of the wellness program, but face challenges with accommodating employees' participation due to workload, scheduling inflexibility, managers' self-efficacy, and lack of formal expectations or training regarding the

wellness program. Several strategies may assist managers to support their employees' participation in wellness programs: the provision of training, formal expectations and encouragement to support employees' participation.

Aim 3: Employees' perception of managers' support for wellness had positive total associations with employees' engagement at work, the perception of agency support for health, the perception of respect and feedback, job satisfaction, and perceived customer orientation. The path analysis revealed a moderate indirect association between managers' support for wellness and employees' engagement at work. About 84% of the association between managers' support and employees' engagement was through indirect associations. There is a moderate direct association between managers' support for wellness and employees' perception of agency support for health and respect and feedback. Our findings suggest that there is an indirect relationship between managers' support for wellness and employees' engagement.

Implications for Practice

This research highlights an incentive for employers to support wellness programs. We found that employees are aware of the support for health they receive and it can change based on what the employer is doing to support employee health. We identified strategies that target managers to build their support for the wellness program, which may benefit employees' participation in wellness and engagement at work. When implementing interventions, health promotion practitioners can use the Workplace Support for Health scale to measure change and benchmark employees' perception of support for health. For example, the scale can assess the need for an intervention or to evaluate whether workplace interventions targeting employees' health are reaching employees. The reliability and validity of the instrument will need to be

tested among other workforce populations. Our findings suggest that strategies, such as formal expectations to support participation and training on the wellness program, may boost managers' support for employees' wellness efforts. Practitioners should consider including these strategies when implementing workplace wellness programs. Training managers to support the wellness program may increase managers' support and have indirect benefits for employees' engagement at work. For example, they can implement training to increase managers' awareness and knowledge of wellness programs and provide them with formal expectations for supporting their employees' participation. Finally, we found that perceived support for employees' wellness efforts has positive benefits for employees' engagement at work. Practitioners can highlight the potential benefits of supporting wellness in order to build support and buy-in for wellness programs. For example, practitioners may leverage the potential to improve engagement at work to build support for wellness among leadership.

Implications for Policy

Workplace policies should outline expectations for managers to support participation in wellness programs. Employers should make sure that managers' productivity goals align with their wellness goals. Written policies should provide guidance on the amount time allotted during work to participate in wellness programs, and clearly outline what is expected of managers to support their employees' wellness efforts. Employers should implement policies that support employees' participation in wellness. Supporting wellness is an investment in employees' health and well-being, and is one form of exchange between employees and organizations. Visible support for employees' wellness is one way employers can invest in their employees. Workplace policies should reflect the organizational priorities for employee health and wellness.

Implications for Research

The Workplace Support for Health scale will need to be tested and validated among other workforce populations, e.g. large workplaces. Instrument validation is an iterative process and new populations will require researchers to gather additional evidence. Researchers will need to test the strategies we provided from Aim 2. Interventions to boost managers' support for wellness programs should include evaluation of managers' support. Researchers should test whether increasing managers' support for wellness results in meaningful changes in engagement at work. Supporting wellness may have indirect benefits. Researchers should test the exchange between managers' support for wellness and employees' engagement. Organizations invest in their workforce through the provision of wellness programs and visible support for employees' participation in wellness activities. Our exploratory analysis suggests that the perception of managers' support for wellness (actions to support employees' participation in wellness programs at work) is indirectly related to employees' engagement at work. Workplace strategies to increase managers' support for wellness (e.g. the provision of training) may indirectly benefit employees' engagement at work. Researchers should test the causal pathways between supporting employees' wellness efforts and engagement at work.