Manager and Supervisor Support for Worksite Health Promotion Programs

Integrative Literature Review

Prepared for
The Washington State Health Care Authority

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Executive Summary

Overview

Employee engagement with wellness programs is often low, and one potential barrier for employees is managers and supervisors (hereafter managers) failing to support participation or discouraging participation. The evidence for the extent to which managers support or impede their direct reports' participation is limited, and it is not clear how best to engage managers as active supporters of wellness programs. To understand how to engage managers, we conducted a literature review to synthesize the existing evidence regarding managers' support for employee participation in programs.

Key Summary Points

Employee engagement with wellness programs is supported by participation-friendly policies and practices, an organizational culture that encourages wellness, and a supportive work environment. Managers encourage participation by establishing organizational policies that reflect a strong commitment to employee health. Managers create a culture of wellness by directly endorsing wellness programs as an organizational priority and allocating resources for implementation of policies and practices. Managers create a supportive work environment by having a positive attitude toward wellness programs and the health of employees.

The results of the literature review suggest the following strategies for ensuring that managers support programs:

- Managers need to be aware of the link between employee health and productivity. Trainings on work-related health topics can increase managers' knowledge and readiness to bring attention to employee health issues.
- Establish policies that support employee participation and allocate resources for programs and policies.
- Clearly communicate and strategically implement programs and policies so that organizational wellness goals align with managers' productivity goals.
- Provide managers with clear role descriptions and expectations for wellness programs, and incentivize managers to take an active role in employee wellness programs.
- All levels of management should be involved in the planning and implementation of wellness programs and activities.

1. Introduction

There has been increasing attention on employee engagement with worksite health promotion programs (WHP), specifically regarding how to increase employee participation and reduce potential barriers to their participation. WHP programs (henceforth referred to as program or programs) are workforce-based initiatives directed at chronic disease prevention including policies and programs supporting healthy behaviors for employees (Goetzel et al. 2008). Employees view access to and provision of programs as a sign their employer is committed to their health and wellbeing (Hammerback et al. 2015). Comprehensive programs can decrease burnout and increase employees' job satisfaction and mental wellbeing (Parks & Steelman 2008, Kuoppala et al. 2011). Workplace cultures that encourage employees in living a healthy life and value the health and safety of the workforce support employee participation in programs (Goetzel et al. 2014).

The current health promotion literature suggests that manager support is a key driver of employee engagement and consequently, successful programs. Managers are important stakeholders when an organization adopts a program (Mujtaba & Cavico 2013). Managers make important decisions that influence employee engagement. Managers are responsible for establishing programs and policies, and allocating resources to support the implementation of programs and policies (Goetzel et al. 2014). Managers create an organizational culture that encourages wellness by directly endorsing programs and showing visible support for employees' health (Caouette et al. 2014, Mujtaba & Cavico 2013). A strong commitment to programs from all levels of management, especially senior and middle managers, is crucial for employee participation (Kaspin et al. 2013). Yet, very little is known about the extent to which managers support or impede their direct reports' participation and it is not clear how best to engage managers to support programs.

The aim of this integrative literature review is to synthesize the existing evidence regarding management support for programs. The synthesis of available data will assist in understanding how to effectively engage managers to support employee participation in programs.

2. Methodology

Manager support for workplace health promotion is an emerging topic with relatively few experimental studies. To address this we took an integrative approach, which is a type of review that systematically describes the existing research while imposing fewer exclusion criteria than traditional systematic reviews (Torraco 2005). The integrative review allows for the inclusion of experimental and non-experimental studies with different methodologies and outcomes including qualitative and quantitative research (Whittemore & Knafl 2005). The search was not limited to health promotion literature, but included literature from occupational health psychology and organizational management to provide evidence for how managers can influence intervention implementation and outcomes (Nielsen & Randall 2013).

2.1 Search Terms and Definition

The search terms for the review were based on existing health promotion literature (see **Table 1**). The strategy involved a variety of methods: electronic database search, searches through library shelves, academic and colleague contacts, and the "snowballing" technique. Snowballing has been shown to be an effective way to find literature and involves tracking down references and citations found in other publications, such as meta-analyses or other reviews (Greenhalgh & Peacock 2005). Consultations with academic colleagues provided information on additional data sources.

Table 1. Search terms and definitions

Term	Definition
Worksite health promotion Other terms: workplace wellness programs, healthy workplace programs, and organizational wellness programs.	Employment-based activity or sponsored benefit aimed at promoting health-related behaviors and disease management. Typically ranges from multi-component programs to single interventions and benefits that can be offered by employers directly, through a vendor, through group health plans, or a combination (Goetzel & Ozminkowski 2008).
Comprehensive program	A coordinated and comprehensive set of strategies that includes programs, policies, benefits, environmental supports, and links to surrounding community, that are designed to meet the health and safety needs of *all* employees (CDC).
Employee participation	Specific interaction with wellness activity or one instance of a wellness program or benefit (Mattke et al. 2013).

Employee engagement	Ongoing participation and use of wellness programs and benefits.
Manager support Other terms: management support, leadership support, supervisor support	Showing concern for the welfare of employees; concrete and repeated actions by a superior that build trust and commitment (Whitener et al. 1998).
Top manager Other terms: chief operating officer (CEO), executive, director	An executive position that has overall responsibility for the conduct and performance of the entire organization, and not just a subunit. Responsible for developing and defining the strategies, objectives, and long-term plans of an organization (Lussier 2011).
Middle manager Other terms: branch manager, lead supervisor, head supervisor, assistant director	Responsible for implementing top managers' strategies and supervising the work of first- line managers. Responsible for the performance and conduct of subunits or groups (Lussier 2011).
Line manager Other terms: first-line manager, supervisor, crew leader, head nurse, or office manager	Reports directly to middle managers and supervises the work of employees who do not hold management positions (Lussier 2011).
Organizational culture Other terms: workplace culture	Shared assumptions regarding the beliefs, values, and norms of the larger group. Organizational culture influences the individual behaviors of the members that belong to the organization (Golaszewski et al. 2008).

2.2 Search Strategy

The electronic databases search included PubMed, Google Scholar, and the University of Washington (UW) libraries, which allowed access to *WorldCat*, PsychArticles, EBSCO, CINAHL, MedLine, and ScienceDirect databases. When electronic sources were not available, article and book chapters were found on library bookshelves and scanned to make an electronic copy.

2.3 Data Sources

Data sources included peer-reviewed journal articles, book chapters, evaluation reports and executive summaries, as well as published dissertation and thesis papers. Study types included randomized and non-randomized trials, longitudinal and observational studies,

interview and focus group studies, and program evaluations. Studies using qualitative, quantitative, and mixed methods were included. The title, abstract, and first pages of each source was reviewed to identify if a source was relevant to the topic and scope of the review. A total of 52 data sources were saved for further review (see **Table 2**).

Table 2. Included data sources

	Peer-reviewed journal article	Book chapter	Program Evaluation	Dissertation and thesis papers	Total
Saved	40	4	3	5	52
Excluded	22	3	3	3	31
Included	18	1	0	2	21

2.4 Inclusion and Exclusion Criteria

Inclusion criteria included documents published from January 1 1990 to January 31 2016 and human participants aged 18 to 65 years. The inclusion and exclusion criteria were applied to data sources during the review process (see **Table 3**), and resulted in the exclusion of 31 data sources. The remaining 21 data sources were summarized and evaluated.

Table 3. Criteria for included articles

	Inclusion	Exclusion
Published	January 1, 1990 to January 31, 2016	Before 1990
Target Population	Working adults 18 to 65 years	Non-working/unemployed populations
Setting	Worksite/occupational interventions	Interventions outside the worksite or occupational setting
Methodology	Quantitative, qualitative, mixed	Practice guidelines, consultant surveys
Study Design	Experimental, quasi-experimental, non-experimental	Confirmatory or exploratory factor analysis, reviews
Topic area	Manager support, leadership support	Topics not related to manager or leadership support
Language	English	Languages other than English

2.5 Data Evaluation

Included studies were evaluated for the quality of evidence based on the quantitative and qualitative criteria of Boswell & Cannon (2012). Quantitative studies were rated on six domains: use of theory, research design, sampling method, data analyses, measurements, and overall relevance (Boswell & Cannon 2012). Qualitative studies were rated on similar domains: use of conceptual theory, study design, data collection, sampling method, analysis, and overall relevance (Boswell & Cannon 2012). Mixed method studies were based on the above criteria and

whether sequential, concurrent, and transformative strategies were used (Boswell & Cannon 2012). A research assistant rated the quality of evidence using a 3-point scale (1= low, 2= moderate, and 3= high).The study summaries and quality ratings are presented in **Table 4** (see **Appendix**).

3. Results

A total of 21 articles were included in the literature review. The literature is grouped into seven different topic areas: beliefs and attitudes, skills and training, work environment, organizational culture, leadership, roles, and management structure. The topics were identified based on the common themes from the findings of each study.

3.1 Managers' Beliefs and Attitudes

Beliefs are an internal feeling that something is true and attitudes are the way beliefs are applied or expressed. Of the studies identified, two observational (Dellve et al. 2007, Downey & Sharp 2007) and three qualitative studies (Renton et al. 2011, Linnan et al. 2007, Gates et al. 2006) provided low- to moderate-quality evidence for managers' beliefs and attitudes related to implementing and supporting programs.

Managers' beliefs about programs differed by the level of management (senior, middle, line), age, and previous experience with programs (Linnan et al. 2007). Senior leaders' attitudes towards responsibility for employees' health were associated with successful program implementation (Dellve et al. 2007). Senior managers with a perceived moral responsibility for employee health were more likely to increase spending on programs, but for human resource managers, perceived control over aspects of implementation was more important for increasing spending (Downey & Sharp 2007). The perception of employee buy-in was important for call center managers in supporting programs; managers who believed employees did not value programs were less likely to promote programs (Renton et al. 2011). Factory managers were supportive of implementing low-cost environmental changes when they believed employees were receptive to strategies promoting healthy behaviors in the workplace (Gates et al. 2006).

3.2 Managers' Skills and Training

Workplace training is any effort initiated by an organization to foster learning among employees with the intention to broaden skills needed for future responsibilities (Snell et al. 2015). Of the studies identified, one randomized trial (Kawakami et al. 2005) and a program evaluation (Stoltzfus & Benson 1994) reported low- to moderate-quality evidence for managers' skills and training related to supporting programs. The findings suggested educational web-based trainings on relevant mental health topics improved managers' knowledge and attitude toward employee health issues, as well as increased employees' perception of manager support (Kawakami et al. 2005). The results from a worksite substance abuse prevention program demonstrated that management trainings aimed at supporting employee health were successfully implemented by being linked with existing safety and productivity initiatives (Stoltzfus & Benson 1994).

3.3 Work Environment

The work environment is defined as the physical conditions and work processes that employees operate in (Clegg et al. 2011). Of the studies identified, one observational (Milner et al. 2013) and four quasi-experimental studies (DeJoy et al. 2009, DeJoy et al. 2011, Goetzel et al. 2009, Goetzel et al. 2010) provided low- to moderate-quality evidence for work environments related to manager support.

The perception of management support is impacted by the amount of tangible evidence (e.g. senior leader endorsement, policies) in addition to managers voicing individual support for health and wellness (Milner et al. 2013). The results from a worksite weight-loss program indicated changes to the work and organizational environment consistent with management support (e.g. senior manager endorsement) were associated with an increase in employees' perception of management support. (DeJoy et al. 2009). Changes included alignment of health and productivity goals, management training on health topics, and reporting feedback and progress to senior leaders (Goetzel et al. 2009, Goetzel et al. 2010). Management support influenced frontline employees' healthy food choices and physical activity when communicated through visible actions and tangible changes to the work environment (DeJoy et al. 2011).

3.4 Organizational Culture

Organizational culture is defined as the norms, attitudes, and shared values of an organization (Schein 2010). Of the articles identified, two qualitative studies (Gillen et al. 2004, Baird & Carroll 2011) provided low-quality evidence for how support from managers affects the organizational culture. The findings from a case study of two call centers indicated managers' visible support and engagement with employees were central to creating an organizational culture that supported health (Baird & Carroll 2011). Results from interviews among construction managers indicated senior managers were responsible for setting the organizational safety culture by making employee health and safety an organizational priority (Gillen et al. 2004). Middle and line managers were responsible for promoting safety culture through role modeling desired behaviors and engaging with employees (Gillen et al. 2004).

3.5 Leadership

Leadership is defined as managers' process of influencing employees to work toward achieving organizational goals (Lussier 2011). Managers' leadership can have a direct impact on employee health through personal contact and indirectly through the configuration of organizational policies and systems (Yukl 2006). However, one observational study provided low-quality evidence for managers' leadership related to supporting programs (Backstrom et al. 2014). The findings from a health promotion project targeting school leaders and teachers indicated leadership health-related values and program approaches were influential on the implementation and long-term outcomes of programs (Backstrom et al. 2014).

3.6 Roles

Roles are the descriptions of what an individual is expected to do. Role conflict can arise when a manager is expected to perform a task that interferes with another role that is expected of them (Clegg et al. 2011). Of the studies identified, two mixed method studies (Makala 2011, Wilson et al. 2007), one qualitative (Linnan et al. 2007), and one observational study (Robbins & Wansink 2016) provided low- to moderate-quality evidence for the role of managers as it relates to supporting programs.

Findings suggested managers' perceived time constraints, workload, and demands were barriers to supporting health programs and initiatives (Wilson et al. 2007). Interviews among

government agency employees indicated that managers did not view promoting programs as part of their role, and did not feel responsible for raising employee awareness about programs (Makala 2011). Results from an online survey indicated managers view annual salary increases and promotions partially linked to workplace wellness efforts as an incentive to take an active role in promoting employee health (Robbins & Wansink 2016).

3.7 Management Structure

The management structure determines how the roles, power and responsibilities are assigned, and how information flows between the different levels of management (Clegg et al. 2011). Research from the fields of organizational management and occupational psychology provide evidence for how management structures influence program implementation. Of the studies identified, two qualitative studies (Hasson et al. 2014, Chuang et al. 2011) and a mixed methods study (Birken et al. 2015) provided low- to moderate-quality evidence.

The findings from an occupational health program indicated senior management endorsement and communication were important for increasing middle and line manager support for programs (Hasson et al. 2014). Managers are important for allowing employee time to participate, and line managers, having the most direct contact, served as positive role models that encouraged employee participation (Hasson et al. 2014). Results indicated senior managers' support (i.e. allocation of resources and visible endorsement) had a direct effect on middle managers' commitment to the implementation of a healthcare innovation (Birken et al. 2015). Importantly, middle managers influenced senior managers' support when they were able to specify the types of support they needed to facilitate implementation (Birken et al. 2015). Findings from an intervention to improve frontline employees' skills indicated when all levels of management were involved in the planning and implementation process it provided a sense of ownership over the program (Chuang et al. 2011).

4. Discussion

The aim of this literature review was to synthesize the existing evidence regarding manager support for programs and to understand how to engage managers to support employee participation in programs. Our results show the research for manager support is limited to descriptions of 1) the importance of manager support, 2) the influence of manager support, and

3) the ways managers show support. Much of the evidence for manager support has come from identifying components of "what worked for successful programs" versus identifying how it worked (Wierenga et al. 2013).

Previous studies have found commitment from all levels of management (senior, middle, line) is needed to support employee engagement with programs, and the perception of managers' support is important for employee participation in programs (Kaspin et al. 2013, Crump et al. 1996, Rost et al. 1990). Managers make decisions that influence employee engagement with programs. Managers are responsible for establishing organizational policies that reflect a strong commitment to employee health (Goetzel et al. 2014). Managers influence the culture of wellness by directly endorsing programs as an organizational priority and allocating resources for implementation of policies and programs (Caouette et al. 2014). Managers create a supportive work environment by showing visible support and commitment toward programs and the health of employees (Mujtaba & Cavico 2013).

Our findings suggest several factors may influence managers' support, including their beliefs and attitudes toward programs and employee health, training on health topics, the work environment, organizational culture, leadership, expected roles, and the structure of management. Strategies to address these factors should include training managers on work-related health topics to increase their awareness and readiness to bring attention to employee health issues. Senior leaders need to establish policies that support employee participation and allocate resources for managers to implement programs and policies. The implemented programs and policies should align managers' productivity goals with wellness goals to avoid any role conflicts. Managers need to have clear role descriptions and expectations for programs, and providing incentives may persuade them to take an active role in supporting programs. Lastly, all levels of management (senior, middle, and line) should be involved in the planning and implementation of programs and policies. However, even from our literature review results it is still unclear if these strategies will engage managers to achieve visible and tangible commitment and support.

In summary, more research is needed on how to effectively target management support, e.g. how do we get managers to encourage employee participation in programs. The diversity and small number of studies included in this review highlights how little we know about engaging managers to support employee participation in programs. There is a need for

intervention approaches intended to boost managers' engagement with and support of programs and policies. Further research is required to identify and target specific determinants of management support.

References

1. Bäckström, I., Lagrosen, Y., & Eriksson, L. (2014). Change of the quality management culture through health-promotion activities?. *Total Quality Management & Business Excellence*, 25(11-12), 1236-1246.
2. Baird, C., & Carroll, W. R. (2011). The role of senior leaders in the development of healthy workplace programs: a case study in call centres. Retrieved from https://library2.smu.ca/handle/01/25654#.VpRQa5MrLVo
3. Birken, S. A., Lee, S.-Y. D., Weiner, B. J., Chin, M. H., Chiu, M., & Schaefer, C. T. (2015). From strategy to action: How top managers' support increases middle managers' commitment to innovation implementation in health care organizations. *Health Care Management Review*, *40*(2), 159–168.
4. Boswell, C., & Cannon, S. (2012). *Introduction to Nursing Research*. Jones & Bartlett Publishers.
5. Caouette, M., Paradis M., Biron C. (2014). 6. *Implementing the Quebec 'Healthy Enterprise' standard: considering readiness for change and psychosocial safety climate*. In: Corporate Wellness Programs: Linking Employee and Organizational Health, pp.120-144.
6. Centers for Disease Control and Prevention, Workplace Health Promotion, glossary: http://www.cdc.gov/workplacehealthpromotion/glossary/index.html
7. Chuang, E., Jason, K., & Morgan, J. C. (2011). Implementing complex innovations: Factors influencing middle manager support. Health care management review, 36(4), 369-379.
8. Clegg, S. R., Kornberger, M., & Pitsis, T. (2011). *Managing And Organizations: An Introduction to Theory And Practice*. Sage.
9. Crump, C. E., Earp, J. A. L., Kozma, C. M., & Hertz-Picciotto, I. (1996). Effect of organization-level variables on differential employee participation in 10 federal worksite health promotion programs. *Health Education & Behavior*, *23*(2), 204–223.
10. DeJoy, D. M., Bowen, H. M., Baker, K. M., Bynum, B. H., Wilson, M. G., Goetzel, R. Z., & Dishman, R. K. (2009). Management support and worksite health promotion program effectiveness. In *Ergonomics and Health Aspects of Work with Computers* (pp. 13–22). Springer. Retrieved from http://link.springer.com/chapter/10.1007/978-3-642-02731-4_2
11. DeJoy, D. M., Parker, K. M., Padilla, H. M., Wilson, M. G., Roemer, E. C., & Goetzel, R. Z. (2011). Combining environmental and individual weight management interventions in a work setting results from the Dow Chemical Study. *Journal Of Occupational And Environmental Medicine*, *53*(3), 245.
12. Dellve, L., Skagert, K., & Vilhelmsson, R. (2007). Leadership in workplace health promotion projects: 1-and 2-year effects on long-term work attendance. *The European Journal of Public Health*, 17(5), 471-476.
13. Downey, A. M., & Sharp, D. J. (2007). Why do managers allocate resources to workplace health promotion programmes in countries with national health coverage? *Health Promotion International*, *22*(2), 102–111.
14. Gillen, M., Kools, S., McCall, C., Sum, J., & Moulden, K. (2004). Construction managers' perceptions of construction safety practices in small and large firms: a qualitative investigation. *Work (Reading, Mass.)*, *23*(3), 233–243.

15. Goetzel, R. Z. (2008). *Workplace Health Promotion: Policy Recommendations That Encourage Employers to Support Health Improvement Programs For Their Workers*. Emory University. Retrieved from http://www.prevent.org/data/files/initiatives/workplacehealtpromotion-policyrecommendations.pdf
16. Goetzel, R. Z., Baker, K. M., Short, M. E., Pei, X., Ozminkowski, R. J., Wang, S., & Bowen, J. D. (2009). First-year results of an obesity prevention program at The Dow Chemical Company. *Journal of Occupational And Environmental Medicine*,*51*(2), 125.
17. Goetzel, R. Z., Guindon, A. M., Turshen, I. J., & Ozminkowski, R. J. (2001). Health and productivity management: establishing key performance measures, benchmarks, and best practices. *Journal of Occupational and Environmental Medicine*, *43*(1), 10–17.
18. Goetzel, R. Z., Henke, R. M., Tabrizi, M., Pelletier, K. R., Loeppke, R., Ballard, D. W., ... Metz, R. D. (2014). Do Workplace Health Promotion (Wellness) Programs Work? *Journal of Occupational and Environmental Medicine*, *56*(9), 927–934.
19. Goetzel, R. Z., & Ozminkowski, R. J. (2008). The Health and Cost Benefits of Work Site Health-Promotion Programs. *Annual Review of Public Health*, *29*(1), 303–323.
20. Goetzel, R. Z., Roemer, E. C., Pei, X., Short, M. E., Tabrizi, M. J., Wilson, M. G., ... Baase, C. M. (2010). Second-Year Results of an Obesity Prevention Program at The Dow Chemical Company: *Journal of Occupational and Environmental Medicine*, *52*(3), 291–302.
21. Goetzel, R. Z., Shechter, D., Ozminkowski, R. J., Marmet, P. F., Tabrizi, M. J., & Roemer, E. C. (2007). Promising Practices in Employer Health and Productivity Management Efforts: Findings From a Benchmarking Study: *Journal of Occupational and Environmental Medicine*, *49*(2), 111–130.
22. Golaszewski, T., Allen, J., & Edington, D. (2007). Working together to create supportive environments in worksite health promotion. *American Journal of Health Promotion*, *22*(4), 1-10.
23. Hammerback, K., Hannon, P. A., Harris, J. R., Clegg-Thorp, C., Kohn, M., & Parrish, A. (2015). Perspectives on Workplace Health Promotion Among Employees in Low-Wage Industries. *American Journal of Health Promotion*,*29*(6), 384-392.
24. Hasson, H., Villaume, K., von Thiele Schwarz, U., & Palm, K. (2014). Managing Implementation: Roles of Line Managers, Senior Managers, and Human Resource Professionals in an Occupational Health Intervention. *Journal of Occupational and Environmental Medicine*, *56*(1), 58–65.
25. Kaspin, L. C., Gorman, K. M., & Miller, R. M. (2013). Systematic review of employer-sponsored wellness strategies and their economic and health-related outcomes. *Population Health Management*, 16(1), 14-21.
26. Kuoppala, J., Lamminpää, A., & Husman, P. (2008). Work health promotion, job well-being, and sickness absences—a systematic review and meta-analysis. *Journal of Occupational and Environmental Medicine*, 50(11), 1216-1227.
27. Linnan, L., Weiner, B., Graham, A., & Emmons, K. (2007). Manager Beliefs Regarding Worksite Health Promotion: Findings From the Working Healthy Project 2. *American Journal of Health Promotion*, *21*(6), 521–528.

28. Lussier, R. (2011). *Management Fundamentals: Concepts, Applications, Skill Development*. Cengage Learning.
29. Makala, I. (2011, March). *Perceptions of Employees and the Level of Awareness About Employee Health and Wellness*. University of Witwaterstrand. Retrieved from http://hdl.handle.net/10539/11475
30. Milner, K., Greyling, M., Goetzel, R., Da Silva, R., Kolbe-Alexander, T., Patel, D., ... Beckowski, M. (2015). The relationship between leadership support, workplace health promotion and employee wellbeing in South Africa. *Health Promotion International*, *30*(3), 514–522.
31. Mujtaba, B. G., & Cavico, F. J. (2013). A Review of Employee Health and Wellness Programs in the United States. *Public Policy and Administration Research*, *3*(4), 1–15.
32. Nielsen, K. (2013). Review Article: How can we make organizational interventions work? Employees and line managers as actively crafting interventions. *Human Relations*, *66*(8), 1029–1050.
33. Parks, K. M., & Steelman, L. A. (2008). Organizational wellness programs: a meta-analysis. *Journal Of Occupational Health Psychology*, 13(1), 58.
34. Renton, S. J., Lightfoot, N. E., & Maar, M. A. (2011). Physical activity promotion in call centres: employers' perspectives. *Health Education Research*, *26*(6), 1050–1059.
35. Rost, K., Connell, C., Schechtman, K., Barzilai, B., Fisher, E. B., & others. (1990). Predictors of employee involvement in a worksite health promotion program. *Health Eduationc Quarterly*, *17*(4), 395–407.
36. Schein, E. H. (2010). *Organizational Culture And Leadership* (Vol. 2). John Wiley & Sons.
37. Serxner, S., Gold, D., Meraz, A., & Gray, A. (2009). Do employee health management programs work. *American Journal of Health Promotion*, *23*(4), 1-8.
38. Snell, S., Morris, S., & Bohlander, G. (2015). *Managing Human Resources*. Nelson Education.
39. Stoltzfus, J. A., & Benson, P. L. (1994). The 3M alcohol and other drug prevention program: Description and evaluation. *Journal of Primary Prevention*, *15*(2), 147-159.
40. Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review*, *4*(3), 356-367.
41. Whittemore, R., & Knafl, K. (2005). The integrative review: updated methodology. *Journal of Advanced Nursing*, *52*(5), 546-553.
42. Wierenga, D., Engbers, L. H., Van Empelen, P., Duijts, S., Hildebrandt, V. H., & Van Mechelen, W. (2013). What is actually measured in process evaluations for worksite health promotion programs: a systematic review. *BMC Public Health*, *13*(1), 1190.
43. Wilson, M. G., Goetzel, R. Z., Ozminkowski, R. J., DeJoy, D. M., Della, L., Roemer, E. C., ... & Baase, C. M. (2007). Using formative research to develop environmental and ecological interventions to address overweight and obesity. *Obesity*, *15*(S1), 37S-47S.
44. Yukl, G. (2008). How leaders influence organizational effectiveness. *The Leadership Quarterly*, *19*(6), 708-722.

Appendix

Table 4. Presents the included studies summarized by design, sample, data collected, and key findings.

Table 4. Summary table of included studies

Author Year	Design	Sample	Data Collected	Key Findings	Quality Score
Kawakami et al. 2005	Randomized trial testing web-based supervisor training	16 section chiefs and 167 subordinates at an engineering company in Japan	Change in supervisor attitude and knowledge, supervisor support, coworker support, subordinate psychological distress	Supervisors that received training improved knowledge and attitude toward worksite mental health. Trained supervisors had a positive effect on subordinates' perception of supervisor support.	1/3
Goetzel et al. 2010 First year results reported in Goetzel et al. 2009	Quasi-experimental study testing an organizational/supportive environmental intervention	1,521 Dow Chemical Company employees at 12 worksites	Employee HRA with biometric data, environmental assessment	Results provide evidence of the incremental effect of a health promotion intervention targeting workplace environment.	2/3
DeJoy et al. 2011 See Goetzel et al. 2010	Quasi-experimental study testing an organizational/supportive environmental intervention	1,859 Dow Chemical Company employees at 12 worksites	Employee HRA with biometric data, environmental assessment	Results suggest management support can impact frontline employees if it is effectively communicated and there are visible actions with tangible changes to environment.	2/3
Goetzel et al. 2009	Quasi-experimental study testing an organizational/supportive environmental intervention	3,152 Dow Chemical Company employees at 12 worksites	Employee HRA with biometric data, environmental assessment	Environmental intervention had an incremental effect on employee health risks.	2/3
DeJoy et al. 2009	Quasi-experimental study testing intervention with senior management endorsement and environmental supports and prompts	1,442 employees at 16 worksites of a national retailer	Perception of management support, employee involvement, physical activity level	The increase in management support resulted in positive changes to work and organizational environment.	2/3
Stoltzfus & Benson 1994	Quasi-experimental study testing an intervention with management training, educational	639 3M employees participating in a worksite Alcohol and Drug	Employee health behaviors, employee empowerment, supervisor skill	Success attributed to strong management support, employee involvement, placing emphasis on caring about coworkers, and linking	2/3

	workshops, and policy changes	Prevention Program	development, and morale.	the program with existing safety and productivity initiatives.	
Milner et al. 2013	Cross-sectional survey from the largest health insurer in South Africa	11,472 employees from 71 companies participating in the *Healthy Company Index*	Provision of WHP policies and programs, leadership support, company commitment, employee wellbeing, organizational health assessment	Company commitment to health promotion mediated the relationship between provision of programs and employee wellbeing.	1/3
Linnan et al. 2007	Cross-sectional baseline survey from the *Working Healthy Project 2*	1,047 senior, middle, and line managers from 24 manufacturing sites	Managers beliefs and attitudes toward offering WHP programs, management-level, age, and experience working at a company offering WHP	Senior and middle managers believed that employers were responsible for employee health. Middle and line managers perceived lack of management interest and production conflicts as barriers.	2/3
Backstrom et al. 2014	Observational study of health promotion activities targeting leadership	102 school leaders and teachers at 8 worksites in Sweden	Perception of leadership qualities, perception of co-workers health	Health-promotion interventions had different outcomes attributed to the quality of leadership provided by school leaders.	1/3
Robbins & Wansink 2016	Cross-sectional online survey	270 worksite managers	Manager attitudes and preferences regarding role in workplace wellness	Managers had favorable attitude and high intentions toward partially linking salary increases and promotions to workplace wellness efforts.	1/3
Downey & Sharp 2007	Cross-sectional survey study	113 senior and human resource managers at 213 automotive parts manufacturing plants in Canada	Managers attitudes toward increasing discretionary spending on WHP programs	General managers' moral responsibility was predictive of intention to increase spending on WHP programs. Human resource managers' perceived control over discretionary spending was predictive of intention to increase spending.	1/3
Hasson et al. 2014	Qualitative interviews conducted as part of a longitudinal occupational health intervention	29 senior, human resource, and line managers at 9 worksites in Sweden	Managers' views of occupational health, the current intervention being implemented, and barriers/facilitators	Findings suggested the need for clear role descriptions and strategies, and aligning intervention to existing organizational structures before implementation.	2/3

			for working with the intervention		
Baird & Carroll 2011 Published Thesis	Case study using interviews and focus groups	26 managers and employees at 2 different call centers implementing WHP programs	Perception of senior leaders role in health promotion implementation	The level of involvement in WHP from senior leaders was central to creating a culture of health.	1/3
Dellve et al. 2007	Prospective study using interviews and quantitative data on employee work attendance	23 health promotion leaders and 3,275 employees at worksites in Sweden	Health promotion strategies, program platform, attitudes related to influencing employee health	Leadership qualities and attitudes towards employee work-related health were important for WHP implementation and long-term work attendance	1/3
Renton et al. 2011	Case study of 10 call centers	15 managers from call centers in Canada	Current practices used to promote physical activity, organizational barriers/facilitators to promoting physical activity to employees	Managers perceived that employees did not value physical activity and would rather smoke than exercise. Physical activity was not considered a priority for the call center managers.	1/3
Gillen at al. 2004	Qualitative focus group study	22 safety managers, risk managers, general contractors, and senior managers	Important aspects of the safety program, unsuccessful practices they had implemented, obstacles to optimum safety management	Workplace safety culture was identified as the most important for implementation. Managers identified supervisors as the most important influence for promoting a workplace safety culture.	1/3
Gates et al. 2006	Qualitative focus groups conducted as part of a larger community-based participatory study	33 managers at 4 manufacturing companies planning to implement a WHP program	Identifying workplace strategies to reduce barriers to wellness programs	Managers that believed the workplace culture would be receptive to health promotion strategies were supportive of the proposed environmental changes.	1/3
Chuang et al. 2011	Qualitative interviews and focus groups conducted as part of an implementation study of a work-based learning program for frontline employees	92 middle managers at 17 health care organizations	Middle managers facilitators and barriers to the implementation process, systems changes needed for implementation	Middle managers' commitment to implementation was dependent on senior managers making it an organizational priority and showing visible support.	1/3
Makala 2011 Published Dissertation	Mixed methods study	Interviews with 12 managers and surveys with 52 managers at a government	Employees awareness about health and perception of wellness program,	Managers did not see promoting wellness programs as part of their managerial role.	2/3

		agency in South Africa	organization, leadership support, health conducive work atmosphere, and wellness improvements	Managers reported not feeling responsible for raising employee awareness about wellness programs.	
Wilson et al. 2007	Mixed methods study to develop environmental and ecological worksite interventions targeted at overweight and obese employees	Employees at Dow Chemical Company	Employee health and job factors, physical environment, social-organization, leadership support, and current health programs	Employees and leaders reported barriers to health initiatives: time constraints, workload, and low perception of relevance to employee health.	1/3
Birken et al. 2015	Sequential mixed methods study	Surveys with 120 middle managers and 103 CEOs, and interviews with 16 middle managers at 120 health centers	Middles managers' moral obligation, perceived costs, and affective attachment to the innovation, and senior management support	There was a direct effect of senior managers' support on middle managers' commitment. Middle managers with open communication to senior managers were able to specify the support needed.	2/3