Sensitivity of a readiness to change survey to change over time and between groups

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Abstract

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Organizational readiness to change is thought to be critical for successful program implementation. We sought to test whether a workplace readiness survey was sensitive to changes in readiness factors over time and sensitive to differences among workplaces participating in different arms of an implementation trial. The survey was previously developed to assess small workplaces' readiness to adopt and implement evidence-based wellness programs. It includes measures of attitudinal constructs, Change Commitment and Change Efficacy, thought to be the most proximal determinants of implementation efforts. We conducted a correlational, pre-post analysis of surveys collected from worksites participating in a site-randomized trial of a program to increase implementation of evidence-based health promotion practices. While we found that Wellness Program Efforts increased significantly among intervention arm sites and not control sites, as

expected, we found no change in other readiness factors; rather, we observed a significant decline in Change Commitment across all study arms.

INTRODUCTION

"It is change continuing change, inevitable change that is the dominant factor in society today."
~Isaac Asimov

This paper reports findings on a measure of organizational readiness to change for implementing health-promotion practices in the workplace. We tested a previously-developed measure to determine its sensitivity to changes in readiness factors over time and sensitivity to differences among workplaces participating in different arms of a site-randomized trial of health promotion implementation. Our hope is to use the readiness measure to identify workplace-specific implementation barriers that can be addressed with implementation-support activities and then to use follow-up readiness measures to determine if support activities have been successful. However, this is only possible if the readiness measure is sensitive to differences in readiness factors over time and differences in support activities.

BACKGROUND

Readiness is defined as the, "Cognitive precursor to the behaviors of either resistance to, or support for, a change effort" (Armenakis, Harris, & Mossholder, 1993). More specifically, organizational readiness is the extent to which employees are psychologically and behaviorally prepared to implement a change. (Weiner, Amick, & Lee, 2008) Organizational readiness is comprised of two primary elements: change commitment and change efficacy. Change commitment describes the shared resolve among employees to pursue change. Change efficacy is the shared belief that a given program's implementation is feasible. (Weiner, 2009)

Organizational readiness, and more specifically change commitment and change efficacy, are thought to be an important determinant of successful program implementation. Although the data to support this claim is limited there has been some suggestive cross-sectional studies done in health service programs and evidenced based intervention implementation. (Gustafson et al., 2003) (Fuller et al., 2007) If accurately measured, organizational readiness could be used in workplace health promotion efforts to target worksites for dissemination; to diagnose and address worksite-specific deficits in readiness; and to assess the effectiveness of implementation support activities by measuring changes in readiness factors over time. Accurate organizational readiness could also be considered or intervened upon with implementation support activities, such as information, training, and marketing materials.

However, there is a dearth of theory-based, validated readiness to change measures. An extensive literature review was undertaken by Weiner and colleagues who concluded that tools available to measure organizational readiness for change lacked evidence of validity or reliability. They concluded that a reliable and valid tool for assessing organizational readiness for change was necessary for purposes of research and practice. (Weiner et al., 2008) A similar literature review concluded that tools to expedite the process were lacking. (Chaudoir, Dugan, & Barr, 2013)

This paper reports findings on an organizational readiness to change survey developed for implementation of evidence-based health promotion practices in the workplace.

METHODS

We conducted a correlational, pre-post analysis of organizational readiness to change surveys collected from low-wage worksites participating in a site-randomized trial of a program to increase implementation of evidence-based health promotion practices.

SETTING

The HealthLinks Trial is a site-randomized, controlled trial conducted in 78 small (20-200 employees) worksites in low-wage industries in King County, Washington state. The trial tested the effectiveness of the 3-phase HealthLinks program on worksite adoption, implementation, and maintenance of evidence based interventions (EBIs), such as the use of small media, improving access to healthy foods, increasing opportunity for physical activity, support for tobacco cessation, etc. (Hannon et al., 2016) It also tests the effect of adding a worksite wellness committees to the HealthLinks program. Worksite wellness committees are a committee that the study recommends the employer create to lead implementation of EBIs. This committee receives an *Implementation Toolkit* provided by the HealthLinks trial. The HealthLinks trial then helps the company to form the committee and will attend the initial committee meeting. The study then compares the two sets of intervention sites (HealthLinks alone and HealthLinks in combination with a wellness committee) with a set of delayed control sites. (Hannon et al., 2016)

Participating worksites include a range of industries: accommodation and food services; arts, entertainment, and recreation; education; health care and social assistance; other services excluding public administration; and retail trade. The HealthLinks trial and baseline findings have been previously reported. (Hannon et al., 2016)

WORKPLACE READINESS QUESTIONNAIRE

Part of this ongoing 3-year trial was to administer the Workplace Readiness Questionnaire, a site-level survey previously-developed (Hannon, 2017). It is based on Weiner and colleagues' theory of organizational readiness to change (Weiner, 2009) and adapted to the context of workplace health promotion. The survey was fielded at baseline, 15-months and at the end of the study. The survey was completed by the study site's point of contact who was often the company's Human Resources manager.

Weiner and colleagues' organizational-level theory of implementation for health promotion posits that successful program implementation is a function of organizational readiness for change, quality of the proposed change, and organizational climate at the time of the change. (Weiner, Lewis, & Linnan, 2009) The theory includes six constructs: (1) Change Commitment, (2) Change Efficacy, (3) Change Valence, (4) Informational Assessment, (5) Context, and (6) Change Related Effort. Change Commitment is the employees' shared resolve to implement a change characterized by a 'want to' as opposed to a 'ought to' behavior. (Weiner, 2009) Change Efficacy is the employee perception that they have the shared capability to change. Change Commitment and Change Efficacy are the constituent parts of Organizational Readiness for Change but there are upstream and downstream constructs that are also important in successful implementation efforts.

Change Valence is whether employees value the proposed changes. Information Assessment is employee perceptions of whether changes are feasible for their organization. An example of Informational Assessment is the question, do the employees feel that there are the resources necessary to implement the change? Context is the contextual environment of the company and can affect organizational readiness for change by either amplifying or dampening the downstream constructs of Change Valence and Information Assessment. For example, are the company leaders willing to try new things? Change Valence and Information Assessment lead to Change Commitment, a collective sense that they are motivated to implement (or improve) a wellness program, and Change Efficacy, the confidence that they have skills and expertise to implement (or expand) their wellness program. Finally, Change Related Effort is actions employees are willing to take outside of job requirements or role expectations. For example, are employees willing to volunteer to implement this change? Change Related Effort is the culmination of Organizational Readiness for Change. (Hannon et al., 2017; Weiner, 2009) (See Figure 1)

The Workplace Readiness Questionnaire comprises six scales; five representing the constructs in the theory of organizational readiness to change, and the sixth representing Change Related Effort, called Wellness Program Effort in the HealthLinks trial survey, which represents the culmination of organizational readiness into organizational action. Unlike the other five constructs Wellness Program Effort is not an attitudinal metric but a measure of current behaviors and actions employers are taking to support wellness. Organizational readiness scores were assessed using data collected from the Workplace Readiness Questionnaire. Scales for the first five constructs (Context, 18 items; Change Valence, 7 items; Informational Assessment, 8 items; Change Commitment, 5 items; and Change Efficacy, 7 items) were scored using 5-point Likert-type scales (1 = strongly disagree, 5 = strongly agree) and drawn exclusively from the Workplace Readiness Questionnaire. Wellness Program Effort was scored using a dichotomous scale with 1 corresponding to No and 5 to Yes. Question 29 (See Table 1) was from Workplace Readiness Questionnaire and items 30-33 from the Employment Assessment Survey. Table 1 contains survey items used to compute the six constructs in the theory of organizational change.

Statistical analysis was performed with Stata/IC 14.2. Baseline and 15-month mean scores were compared for each wave of the trial with a paired t-test (mean comparison test) assuming equal variance for statistical significance at a 95% confidence interval. Scores were compared both using the average scale score for each construct in the theory of organizational readiness to change as well as at an individual question level by comparing mean scores at baseline with mean scores at 15 months. A second analysis was performed by dichotomizing the sample into control versus any intervention, which combined the HealthLinks standard and HealthLinks plus wellness committee arms.

RESULTS

Of the initial 78 employers, follow-up data at 15 months was collected from 72 worksites; three were lost from the control group, two from standard HealthLinks, and one from HealthLinks with a wellness committee. Among the attitudinal scales the highest total score was Change Valence within the control with a score of 3.94. The lowest was Change Commitment for the Standard HealthLinks arm with a score of 3.29. 15-Month characteristics are summarized in Table 2.

Results for the comparison of construct mean scores from baseline to 15-months are presented in Table 3. Among the six constructs the only statistically significant changes were found in Change Commitment and Wellness Program Effort. Change Commitment declined for control sites, standard HealthLinks, and the combined intervention group. Wellness Program Effort increased in the standard HealthLinks, in the HealthLinks + Wellness Committee and in the combined intervention group. Bar graphs 1 and 2 illustrate changes in means with 95% CI for each arm of the trial at baseline and 15-months for Wellness Program Effort and Change Commitment.

In Table 4, we compare item mean scores from baseline to 15-months for Wellness Program Effort. Item 33, time spent managing wellness activities, item 29, our organization has established, written wellness goals, and item 30, does the company have a worksite wellness committee, all increased significantly in the HealthLinks + Wellness Committee and in the combined intervention group. Items 29 and 30 also increased significantly in the standard

HealthLinks arm. Items 29 and 30 were answered as "No" by all organizations in all arms at baseline.

In Table 5, we compare items means from baseline to 15-months for Change Commitment, which showed significant declines in all arms including the control. Item 20, our senior leaders are committed to improving our (starting a) wellness program, declined significantly for all intervention arms but not for controls. Item 21, our opinion leaders are committed to improving our (starting a) wellness program, and item 23, we need to improve our (start a) wellness program within the next year, declined significantly for the control arm but not the intervention arms.
The interventions were most significantly impacted by Questions 20 for the HealthLinks plus Wellness Committee arm and Question 22 for the Standard HealthLinks arm. And item 22, we are motivated to improve our (implement a) wellness program, declined significantly in the standard HealthLinks arm and in the combined intervention arm.

DISCUSSION

We sought to understand whether a workplace readiness to change survey developed specifically for readiness to implement health promotion activities was sensitive to change over time and to differences in implementation support activities. If we observed statistically significant increases among intervention arms sites (but not controls) in readiness factors, particularly in Change Commitment, Change Efficacy and Wellness Program Effort, then the readiness questionnaire could be used to assess the effectiveness of implementation strategies over time and potentially to better respond to individual workplace needs. We did observe the predicted association in Wellness Program Effort, a measure of the most proximal activities (such as having written wellness goals) to implementation of the EBIs. Wellness Program Effort increased significantly among the intervention arms and did not change in the control arm. Items 29, 30, and 33 of Wellness Program Effort are activities directly addressed by the intervention arms' design.

However, we found no change in other readiness factors; rather, we observed a significant decline in Change Commitment across all study arms. Every Change Commitment item declined in every arm of the study but for the exception of no change in item 21 in the HealthLinks plus Wellness arm. There are several potential explanations for the significant decline in Change Commitment. It is possible that employers became more vigilant to deficiencies in their workplace when initially presented with metrics needed for successful workplace health promotion activities. By knowing the ingredients necessary for a successful program, they would then be more aware of how their workplace was lacking when responding to the follow-up survey. Another possibility is that the broader business environment in Washington, such as a political shift, changed in a way that weakened commitment to workplace health promotion between the baseline and 15-month assessments. However, the most likely explanation is regression to the mean. Commitment to workplace health promotion almost certainly waxes and wanes randomly at a given worksite, and likely would affect a given site's willingness to participate in studies; sites were recruited to HealthLinks over a period of approximately 10 months, and the sites that agreed to participate were probably more likely randomly waxing in interest and commitment. Consequently, at 15 months they probably were regressing toward their mean level of commitment.

The other four workplace readiness constructs, based on the theory of organizational readiness to change, showed no statistically significant changes. There are multiple explanations for lack of change in these four constructs. First is that workplace wellness programs do not change attitudes related to readiness even if it does change behaviors. Another possibility is that the HealthLinks intervention was an unsuccessful program in which there was not successful implementation of EBIs. If that were the case then we would not expect to see changes in readiness. However, it is highly unlikely that HealthLinks was unsuccessful. The program was based on the CDC's *Guide to Community Preventive Services* which has shown efficacy in other settings.

STRENGTHS

This study has multiple strengths. First, this data was collected by using a survey that was systematically developed for this setting, after extensive think-aloud interviews followed by validation in a cross-sectional sample of employers. (Hannon et al., 2017) Survey questions were then administered to companies participating in a randomized, controlled-trial of implementation of workplace health promotion practices. Initial study demographics were equally distributed to all three arms and sampled from varied industries. Data collection was multiphasic with a lengthy follow-up period. (Hannon et al., 2016) Finally, with a sample size of 78 and an average of 26 companies per arm the construct scores are powered at 80% to see a change in score of as little as .25.

LIMITATIONS

The data may be influenced by selection bias. This bias could result in sampling from a group which one would expect to show little change in readiness or change in health behaviors. It is possible that most of the sample were representative of worksites with a higher baseline readiness. These companies would have less room to improve and show little to no change. However, the low initial readiness scores make this unlikely. Another possibility is that the data samples from a company whose employers are in more extreme need of help. The companies may be more resistant to change. If so it is possible that the next data collection point will begin to show improvements because it takes longer to implement change in resistant companies.

Another issue is that this is an employer based questionnaire. Most theory and data leading up to this report were exploring employee resistance to change. Perhaps a similar study which questions the employees will show changes in readiness that employers do not perceive. Although the initial HealthLinks study's implementation was directed at the organizational level, by focusing attention on the employers we may have a biased view of employee readiness which is critical to successful organizational readiness.

A third possible limitation is that in Weiner's original Theory of Organizational Change he described his sixth construct as Change Related Effort. He described scenarios in which members exhibited more actions such as volunteering and or exceeding job roles to support an organizational implementation of change after being motivated by organizational readiness. Although this is a more downstream construct of readiness it may capture aspects of readiness missed by this analysis.

Finally, employee turnover could have an impact on results. Analysis of the impact of employer turnover is outside the scope of this analysis but may aid in explaining trends in the data.

Further Study

The most important next step is to assess whether baseline readiness scores predicted subsequent implementation of workplace health promotion EBIs.

Another valuable study would be to repeat this trial with employees as survey respondents. It would provide a more direct comparison of readiness to change constructs and implementation at the employee level. However, it would be more logistically and technically complex.

Finally, the Theory of Organizational Change was developed to assess readiness for change. New theory may need to be developed to identify the factors that determine implementation progress and success.

CONCLUSIONS

While we found that Wellness Program Efforts increased significantly among intervention arm sites and not control sites, as expected, we found no change in other readiness factors; rather, we observed a significant decline in Change Commitment across all study arms. If our findings are replicated, new theory about the role of organizational readiness to change may be needed.

BIBLIOGRAPHY

Armenakis, A. A., Harris, S. G., & Mossholder, K. W. (1993). Creating Readiness for Organizational Change. *Human Relations*, *46*(6), 681–703. http://doi.org/10.1177/001872679304600601

Chaudoir, S. R., Dugan, A. G., & Barr, C. H. (2013). Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implementation Science*, *8*(1), 22. http://doi.org/10.1186/1748-5908-8-22

Fuller, B. E., Rieckmann, T., Nunes, E. V., Miller, M., Arfken, C., Edmundson, E., & McCarty, D. (2007). Organizational Readiness for Change and opinions toward treatment innovations. *Journal of Substance Abuse Treatment*, *33*(2), 183–192. http://doi.org/10.1016/j.jsat.2006.12.026

Gustafson, D. H., Sainfort, F., Eichler, M., Adams, L., Bisognano, M., & Steudel, H. (2003). Developing and Testing a Model to Predict Outcomes of Organizational Change. *Health Services Research*, *38*(2), 751–776. http://doi.org/10.1111/1475-6773.00143

Hannon, P. A., Hammerback, K., Allen, C. L., Parrish, A. T., Chan, K. G., Kohn, M. J., … Harris, J. R. (2016). HealthLinks randomized controlled trial: Design and baseline results. *Contemporary Clinical Trials*, *48*, 1–11. http://doi.org/10.1016/j.cct.2016.02.011

Hannon, P. A., Helfrich, C. D., Chan, K. G., Allen, C. L., Hammerback, K., Kohn, M. J., … Harris, J. R. (2017). Development and pilot test of the workplace readiness questionnaire, a theory-based instrument to measure small workplaces' readiness to implement wellness programs. *American Journal of Health Promotion*, *31*(1), 67–75. http://doi.org/10.4278/ajhp.141204-QUAN-604

Weiner, B. J. (2009). A theory of organizational readiness for change. *Implementation Science : IS*, *4*, 67. http://doi.org/10.1186/1748-5908-4-67

Weiner, B. J., Amick, H., & Lee, S.-Y. D. (2008). Conceptualization and measurement of organizational readiness for change: a review of the literature in health services research and other fields. *Medical Care Research and Review : MCRR*, *65*(4), 379–436. http://doi.org/10.1177/1077558708317802

Weiner, B. J., Lewis, M. A., & Linnan, L. A. (2009). Using organization theory to understand the determinants of effective implementation of worksite health promotion programs. *Health Education Research*. http://doi.org/10.1093/her/cyn019

TABLES

Table 1: Worksite Readiness Questionnaire

Context	
	1. The senior leaders are willing to try new things.
	2. The senior leaders seek ways to improve the work climate.
	3. The senior leaders reward creativity and innovation in the worksite.
	4. The senior leaders promote team building to solve worksite problems.
	5. The managers seek ways to improve the work climate.
	6. The managers encourage employees to participate in programs.
	7. Opinion leaders are willing to try new things.
	8. Opinion leaders seek ways to improve the work climate.
	9. When we want to try something new we have the training resources to do it.
	10. When we introduce a new program or change we measure its success by asking employees to fill out a survey about the program.
Information Assessment	
	11. Most employees could take time at work to participate in wellness programs.
	12. Senior leaders would dedicate financial resources to wellness programs.
	13. Senior leaders would dedicate staff time to planning wellness programs.
	14. We have one or more employees who are wellness champions.
	15. We have one or more senior leaders or managers who are wellness champions.
Change Valence	
	16. Wellness programs would improve employee health in my organization
	17. Wellness programs reduce employers' health care costs.
	18. Wellness programs help companies recruit and retain employees.
	19. Wellness programs are a good use of financial resources.
Change Commitment	
	20. Our senior leaders are committed to improving our (starting a) wellness program.
	21. Our opinion leaders are committed to improving our (starting a) wellness program.
	22. We are motivated to improve our (implement a) wellness program.
	23. We need to improve our (start a) wellness program within the next year.
	24. How much time do you think you could spend each week on managing a wellness program? (1. < 30 minutes, 2. 30-59 minutes, 3. 1-2 Hours, 4. 2-3 Hours, 5. > 3 Hours)
Change Efficacy	
	25. We have the skills and expertise to expand our (implement a) wellness program.
	26. We have enough financial resources to support a wellness program.
	27. We can (could) manage the politics of implementing a wellness program.
	28. We can (could) get people to participate in our wellness program.
Wellness Program Effort (1 = "No, 5 = "Yes")	
	29. Our organization has established, written wellness goals.
	30. Does [your company] have a worksite wellness committee?
	31. Does your company have a budget dedicated to health promotion or wellness?
	32. Does your company have a health promotion or wellness coordinator?
	33. In an average week, how much time do you spend on managing wellness activities? (1. < 30 minutes, 2. 30-59 minutes, 3. 1-2 Hours, 4. 2-3 Hours, 5. > 3 Hours)

Table 2: 15-month Construct Characteristics

Intervention Arm Results at 15 Months

	Control				Standard HealthLinks				HealthLinks plus Wellness Committee			
	Mean	95% CI		SD	Mean	95% CI		SD	Mean	95% CI		SD
Context	3.62	3.41	3.83	.46	3.44	3.20	3.67	.58	3.42	3.18	3.65	.56
Change Valence	**3.94**[1]	3.68	4.20	.56	3.88	3.66	4.09	.54	3.87	3.65	4.09	.54
Informational Assessment	3.59	3.35	3.83	.53	3.42	3.22	3.62	.50	3.64	3.38	3.90	.64
Change Commitment	3.30	3.03	3.56	.59	**3.29**[1]	3.04	3.55	.63	3.45	3.23	3.67	.53
Change Efficacy	3.40	3.13	3.68	.60	3.35	3.15	3.55	.47	3.42	3.13	3.71	.71
Wellness Program Effort[2]	1.25	1.00	1.40	.43	1.81	1.49	2.05	.70	1.93	1.81	2.77	1.16

[1]Highest and lowest mean scores. Wellness Program Effort excluded because scored on different scale.
[2]Wellness Program Effort scored 1= "No", 2 = "Yes"

Table 3: Baseline and 15-Month Comparisons

		Baseline	15 Month	Difference	P-value	Alpha[1]
Context						
	Control	3.51	3.62	0.11	0.40	0.72
	Standard HealthLinks	3.55	3.44	-0.11	0.42	0.85
	HealthLinks + Wellness Committee	3.61	3.42	-0.20	0.22	0.85
	Any Intervention[2]	3.43	3.58	0.15	0.14	0.85
Change Valence						
	Control	4.01	3.94	-0.07	0.63	0.74
	Standard HealthLinks	4.13	3.88	-0.25	0.07	0.71
	HealthLinks + Wellness Committee	3.90	3.87	-0.03	0.82	0.60
	Any Intervention	4.02	3.87	-0.15	0.15	0.65
Information Assessment						
	Control	3.80	3.59	-0.21	0.21	0.68
	Standard HealthLinks	3.57	3.42	-0.15	0.27	0.42
	HealthLinks + Wellness Committee	3.58	3.64	0.06	0.75	0.64
	Any Intervention	3.57	3.53	-0.04	0.70	0.52
Change Commitment						
	Control	3.73	3.30	-0.44	**0.01**	0.79
	Standard HealthLinks	3.71	3.29	-0.42	**0.01**	0.69
	HealthLinks + Wellness Committee	3.61	3.45	-0.16	0.32	0.69
	Any Intervention	3.66	3.37	-0.29	**0.01**	0.69
Change Efficacy						
	Control	3.52	3.40	-0.12	0.51	0.72
	Standard HealthLinks	3.48	3.35	-0.13	0.36	0.38
	HealthLinks + Wellness Committee	3.49	3.42	-0.07	0.71	0.72
	Any Intervention	3.49	3.39	-0.10	0.39	0.61
Wellness Program Effort						Exclude Q.33[3]
	Control	1.28	1.20	-.08	0.60	0.49
	Standard HealthLinks	1.40	1.77	0.36	**0.05**	0.37
	HealthLinks + Wellness Committee	1.60	2.29	0.69	**0.02**	0.71
	Any Intervention	1.50	2.02	0.52	**<0.001**	0.49

[1]Cronbach's Alpha for internal consistency
[2]Any Intervention combines Standard HealthLinks and HealthLinks plus Wellness Committee
[3]Q. 33 excluded from alpha because it is only Wellness Program Effort question not on dichotomous scale

Table 4: Wellness Program Effort Scoring

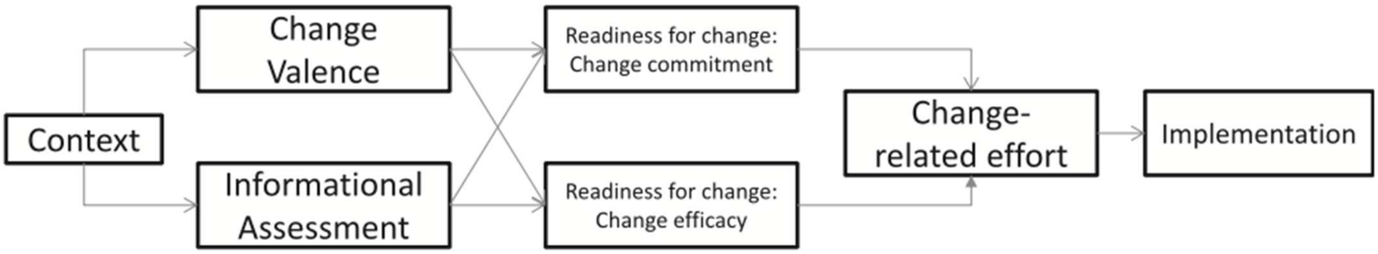
		Baseline	15 Month	Difference	P-value
Q.29	Our organization has established, written wellness goals.				
	Control	1.00	1.00	0.00	
	Standard HealthLinks	1.00	1.77	0.77	**0.01**
	HealthLinks + Wellness Committee	1.00	2.44	1.44	**<0.001**
	Any Intervention	1.00	2.10	1.10	**<0.001**
Q.30	Does [your company] have a worksite wellness committee?				
	Control	1.00	1.00	0.00	
	Standard HealthLinks	1.00	1.62	0.62	**0.03**
	HealthLinks + Wellness Committee	1.00	3.72	2.72	**<0.001**
	Any Intervention	1.00	2.65	1.65	**<0.001**
Q.31	Does your company have a budget dedicated to health promotion or wellness?				
	Control	1.50	1.57	0.07	0.86
	Standard HealthLinks	1.14	1.46	0.32	0.27
	HealthLinks + Wellness Committee	1.31	1.64	0.33	0.37
	Any Intervention	1.22	1.55	0.33	0.16
Q.32	Does your company have a health promotion or wellness coordinator?				
	Control	1.33	1.38	0.05	0.89
	Standard HealthLinks	1.86	2.54	0.68	0.18
	HealthLinks + Wellness Committee	2.38	2.12	-0.26	0.62
	Any Intervention	2.11	2.33	0.22	0.54
Q.33	In an average week, how much time do you spend on managing wellness activities?				
	Control	1.00	1.05	0.05	0.29
	Standard HealthLinks	1.21	1.46	0.25	0.25
	HealthLinks + Wellness Committee	1.12	1.52	0.40	**0.05**
	Any Intervention	1.17	1.49	0.32	**0.03**

Table 5: Change Commitment Scoring

		Baseline	15 Month	Difference	P-value
Q.20	Our senior leaders are committed to improving our (starting a) wellness program.				
	Control	4.00	3.62	-0.38	0.13
	Standard HealthLinks	3.79	3.42	-0.36	**0.09**
	HealthLinks + Wellness Committee	3.96	3.44	-0.52	**0.04**
	Any Intervention	3.87	3.43	-0.44	**0.01**
Q.21	Our opinion leaders are committed to improving our (starting a) wellness program.				
	Control	4.00	3.48	-0.52	**0.01**
	Standard HealthLinks	3.86	3.69	-0.16	0.44
	HealthLinks + Wellness Committee	3.50	3.68	0.18	0.36
	Any Intervention	3.69	3.69	0.00	0.99
Q.22	We are motivated to improve our (implement a) wellness program.				
	Control	4.17	3.86	-0.31	0.15
	Standard HealthLinks	4.21	3.50	-0.71	**<0.001**
	HealthLinks + Wellness Committee	4.15	3.96	-0.19	0.31
	Any Intervention	4.19	3.73	-0.46	**<0.001**
Q.23	We need to improve our (start a) wellness program within the next year.				
	Control	4.21	3.38	-0.83	**<0.001**
	Standard HealthLinks	4.18	3.73	-0.45	0.10
	HealthLinks + Wellness Committee	3.96	3.92	-0.04	0.85
	Any Intervention	4.07	3.82	-0.25	0.15
Q.24	How much time do you think you could spend each week on managing a wellness program?				
	Control	2.29	2.14	-0.15	0.56
	Standard HealthLinks	2.54	2.12	-0.42	0.13
	HealthLinks + Wellness Committee	2.46	2.24	-0.22	0.43
	Any Intervention	2.50	2.18	-0.32	0.10

FIGURES

Figure 1: Theory of Organizational Readiness to Change[1]



[1]Figure taken from Hannon PA, Helfrich CD, Chan KG, et al. Development and pilot test of the workplace readiness questionnaire, a theory-based instrument to measure small workplaces' readiness to implement wellness programs. *Am J Heal Promot*. 2017;31(1):67-75. doi:10.4278/ajhp.141204-QUAN-604.

Figure 2: Wellness Program Effort Means/CI by Arm

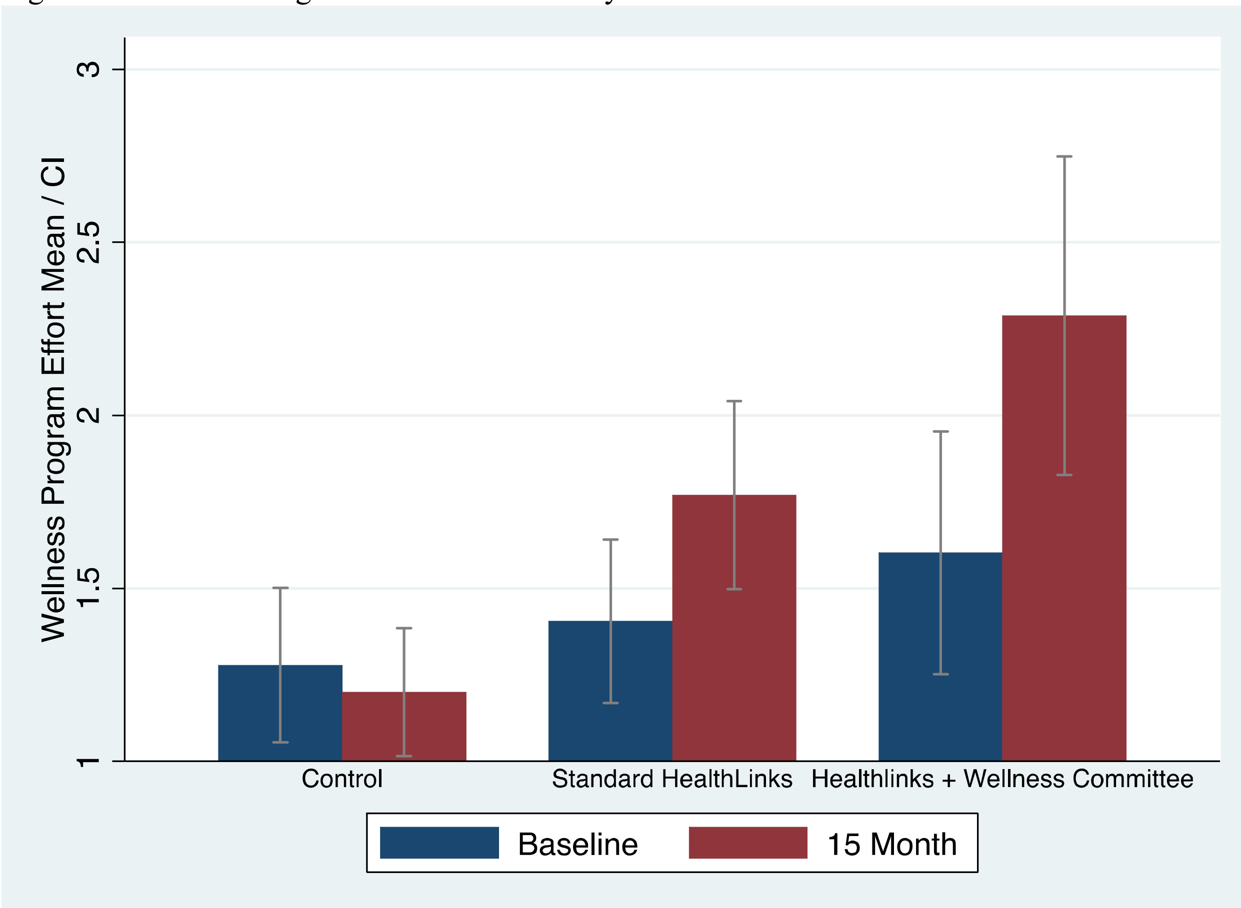


Figure 3: Change Commitment Means/CI by Arm