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Environmental assessment at worksites following a multilevel intervention to promote activity and changes in eating: The PACE Project

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Abstract

Objective—To evaluate changes in the worksite environment in response to a multilevel intervention over a two year period.

Methods—Worksites were recruited in the greater Seattle area, and 34 were randomized to intervention or comparison condition. The intervention was based on the ecological model, with a framework of defined phases of intervention that included worksite wide events implemented in partnership with employee-based advisory boards. The assessment of the worksite environment used a modification of the CHEW. Subscales were developed using baseline data only. The intervention effect on different aspects of the worksite environment was estimated using logistic regression with robust estimating procedures.

Results—Only changes in the physical activity and nutrition information environments were significantly associated with the intervention.

Conclusions—This paper provides one of the first attempts at using environmental assessment in the evaluation of worksite interventions.

Introduction

Worksites have been recognized as an important context for conducting and evaluating health promotion and disease prevention programs in general ¹, and obesity prevention programs in particular ². Adults spend a significant part of their day at work, and a large proportion of adults are employed ³. Companies in the United States, employ and therefore reach a large proportion of American adults ⁴. While earlier health promotion efforts in worksites relied on volunteers for interventions and evaluations ⁴, more recent studies have recognized the importance of working with the entire company ⁵⁻⁷.

Changing behaviors related to obesity risk has proved to be a challenging task. Worksites provide a potentially potent channel in which to implement and evaluate interventions targeted at the behavior and health of employees. Successful interventions will need to

change the environment in which the employees work and not just the individual behaviors of the employees themselves⁸.

Interventions have been developed that address multiple levels of influence in the company. The strategies include engaging administrators and decision makers, intervening on the worksite infrastructure, and providing employee behavior change opportunities at the individual level. The worksite infrastructure of communications, facilities, and human interaction are known, respectively, as the information, physical and social environments. The degree of success of these multilevel interventions should be evaluated in reference to each of these levels.

The Physical Activity and Changes in Eating (PACE) study is a group randomized controlled trial of small to medium sized worksites in the Seattle Metropolitan Area. The intervention was designed to target all three levels described above in terms of promoting increased physical activity and healthy eating choices in order to reduce or maintain employee weight. Evaluations were designed to capture a snapshot of the company at both baseline and two year follow-up.

In collaboration with a consortium of seven funded worksite obesity prevention projects from New York to Hawaii, we identified a tool that can be used to evaluate the information and physical environment of worksites. The common evaluation tool used in these studies is a modification of the Checklist of Health Promotion Environments at Worksites (CHEW)⁹. The CHEW evaluates three environmental domains: physical characteristics, information environment and characteristics of the surrounding neighborhood. The health-related behaviors it covers are physical activity, health eating, alcohol consumption and smoking⁹. The modified form we used concerns only physical activity and healthy eating but covers all three domains. We refer to the modified form here as the Environmental Assessment (EA) checklist.

The purpose of this paper is to describe the implementation of the EA checklist, explore its measurement properties, and to evaluate the effects of the PACE project intervention in two EA domains (information or physical environment) relevant to either physical activity or healthy eating behaviors, over a two year period.

Methods

Setting

The study recruited worksites in the Seattle Metropolitan Area restricted by size and guided by standardized industrial classification (SIC) codes. The approach has been described elsewhere.¹⁰ Briefly we mailed, called and then visited eligible companies, giving priority to eligible companies within one hour of travel from the study center. The eligibility criteria included information from screening and the company questionnaire regarding company size (50 to 350 employees), having a high proportion of employees with sedentary or stationary occupation, low turnover rate (<20% per year for the past two years), low proportion of non-English speaking employees (<30%), company in existence for at least 3 years, and operations at no more than two physical locations.

Worksites were recruited in waves and paired within wave before randomization using a weighted distance measure to ensure balance of characteristics between intervention and delayed intervention groups. Factors used in the distance measure guiding the pairing were: baseline survey response rate, worksite size, percent employees who were sedentary, professional services classification (SIC 80 to 87) or not, presence of an existing health promotion program or not, percent blue collar employees and percent white collar

employees. Altogether, 34 worksites were randomized to intervention or delayed intervention group. One worksite dropped out immediately following the baseline survey because of major turnover in the company and subsequent refusal to continue participation by the new management.

Assessment

This group randomized trial evaluated worksites at baseline and at a two year follow-up using two snapshots of the company that included independent cross-sectional samples of worksite employees. The individual assessments included measured height and weight, employee surveys, and, for a sample of respondents at each worksite, intensive assessment of blood measures, 24 hour recall, waist circumference and pedometer logs at each time point. Worksite level assessments included a company questionnaire administered at baseline only, and an assessment of the worksite environment using a modification of the CHEW⁹ (the EA checklist) at both baseline and follow-up.

The EA tool is the focus of the current paper and is organized as a checklist, which included the following sections (subsections): Parking Bicycle and Grounds Assessment (Parking & Commuting; Grounds Assessment as availability for employees), Neighborhood Assessment, Building Assessment (Exterior, Interior, and Stairwells), Signage Assessment (Physical Activity, Nutrition), Vending Machine Assessment, Weight Control or Physical Activity Programs). Response options used a mixture of counts and “yes/no” choices, providing space for additional descriptors of locations of stairwells and vending machines to facilitate matching of responses from baseline to follow-up.

The process followed to complete the EA checklist was orchestrated by the project coordinator. An appointment was arranged between the worksite contact and one of the study staff, acting as rater of the EA assessment. On the date arranged, the assessment started with an evaluation of the neighboring area and the grounds and exterior of the buildings by the rater before meeting with the worksite contact. The interior assessment was always conducted in the presence of the worksite contact who served as escort around the facility. All worksites are secured locations that do not allow non-employees to roam freely around the facility.

The rater would ask the contact the location of bike racks, bike lockers, stairs, vending machines, community information boards (usually located in lunchrooms) or other areas that may provide posting areas for information. The worksite contact would not assist in the counting process of bikes or evaluating the stairs, or vending machines. At the end of the EA assessment, once the interior assessment is complete, the rater would ask the worksite contact about any onsite programs for weight control or physical activity provided by the company.

Intervention

The intervention was based on a modification of the ecological model. The theoretical framework is shown in Figure 1. The framework emphasizes the importance of working at three levels: the worksite environment and the individual level, facilitated by an intermediate level consisting of an Employee Advisory Board (EAB) composed of worksite representatives. We used defined phases of intervention that included worksite wide events, which were implemented in partnership with EABs established in each intervention worksite; this has been described in detail elsewhere¹⁰. The essential elements of the intervention included the establishment of an EAB, regular meetings between EAB members and an assigned study interventionist to plan implementation of the intervention, regular worksite wide events involving the whole company such as a grand “kick-off” event

to initiate the project, constant “inescapable” messages around the worksite about the project, a self-help manual which included goal setting and skill building and was distributed to every employee, and an emphasis on simple changes that can build to larger changes in eating and physical activity. The intervention followed a phased timeline commencing with raising awareness, and going on to skill building in physical activity change, skill building in eating choice change, balancing energy intake and expenditure, engaging the company in policy change, and finally emphasis on social norms and maintaining behavior change. Exact details of implementation in each intervention worksite were decided in partnership between the EAB and the assigned interventionist.

Components of the intervention that might be expected to change some part of the worksite environment were distributed throughout the implementation timeline. Early in the first phase, for example, information in the form of posters, table tents, and other print media was posted throughout the worksite to encourage participation in activities, including the kick-off event. The EAB was taught about the need for “constant and inescapable messages” in the worksite in order to keep the project in employees’ minds, and given the responsibility of posting new flyers and posters throughout the period of intervention. In the second phase, the creation of a walking loop at work was effected principally by signage rather than any construction of a new walking path. Worksites created walking loops in areas to which they had access, mostly within the neighborhood within which the company resides, but occasionally the worksites used public access walking trails or parks nearby. A few worksites also created walking loops within the worksite itself (e.g. created a walking loop around the floor plan of the building). The intervention was focused on encouraging the use of the loop with campaigns such as “Walk Across Washington; and “10,000 Steps”. Also in phase 2, “Climb Your Way to the Top” was an optional stair climbing campaign, encouraging employees to use the stairs. This was achieved by using flyers promoting the use of stairs that were posted next to elevators. In some worksites, a competition within the company was used to promote the use of stairs. Worksites also could elect to play music, display artwork, or re-paint stairwells to enhance their appeal to employees. Use of a specially created website to support the whole intervention was also introduced during this phase, along with the self-help manual distributed to all employees. Phase 3 focused on eating changes supported by food demonstrations, and introduced the idea of balancing energy intake with energy output. In phase 4, activities that were advertised via flyers or posters included sponsored walk/runs, encouraging pilates, yoga, kick boxing classes, a week long “Healthy Challenge” to promote healthy eating and more physical activity, and subsidized health club memberships. Also in phase 4, an optional vending machine activity titled “Including Healthy Options in Worksite Vending Machines” provided information for EAB members to negotiate including healthy snack alternatives in the worksite vending machines, or if the vending machine contract could not be changed, the activity enabled access to healthy alternatives in other ways, for example in some worksites snack baskets, with healthy food, were made available at the reception desk or at other convenient locations at the worksite. The constructs within each level of the intervention, organizational, environmental and individual, had associated strategies, a small number of which matched up loosely with a subscale of the EA checklist. This is illustrated in Table 1. Within the organizational level, there are policies, structures and resources, the cornerstone of which are the EAB meetings. In the phases 4 and 5 of the intervention, the EAB worked with the senior management to obtain commitment to sponsor ongoing opportunities for healthy eating and physical activity, and this was reported to the rater by the worksite contact and captured on the EA checklist. At the environmental level, social norms, awareness building and maintenance, and availability of resources were part of the intervention, leading to strategies that encouraged support systems, provided constant inescapable messages and a resource center. The EA checklist included items in the information environment, including stair signage. It also included an accounting of vending machine options, but did not assess

alternatives to vending machine snacks. At the individual level, there were regular cues for behavior change, multiple opportunities for self-assessment and feedback (including at worksite wide events), and skill building. One poster/flyer option included encouragement to use bikes, and bike racks or facilities was a subscale on the EA checklist.

Statistical approach

The checklist is made up of a variety of questions in different formats that have different statistical properties. Their distributions and pair-wise correlations were examined. Some variables represent counts that might be expected to vary in proportion to the number of employees at the worksite; others depend on the layout of the building in terms of number of floors and size of the footprint. Initial development of the checklist scoring was restricted to baseline data. Our first step was to identify groups of variables that appeared to assess similar constructs. For example, seven items provided descriptions of stairwells including “painted, decorated or finished walls”, “carpeted”, “utilities not visible in stairwell”, etc. that might distinguish a pleasant stairwell from an unpleasant stairwell. Variables which represent worksite-wide counts of some environmental feature (number of signs and notices promoting physical activity or providing nutritional information) were expressed as counts per employee. The constructs apparently measured by these groups of variables were 1) bike and rack counts, 2) other provisions for bikes, 3) worksite grounds improvements that encourage physical activity, 4) interior facilities that support physical activity, 5) stairwell improvements, 6) stair signage, 7) physical activity signage, 8) nutrition signage, 9) vending machine healthy options, 10) vending machine diet sodas and 11) Existence/sponsorship of weight control or physical activity programs. For the information environment domain, signage encouraging stairway use resulted in 3 items, and the information environment for physical activity had five items. The information environment for nutrition had four items related to dietary fat reduction, more fruits and vegetables, general dietary information and weight loss (standardized by company size). Items with similar measurement characteristics within a construct were combined using an average or a sum, standardized for the size of the company when appropriate. The median scores and the interquartile range (the 25th centile and 75th centile of the distribution) were calculated for each group of variables, as well as the percent nonzero at each time point. Hot drinks machines tended to be separate from either snack machines or cold drink machines and did not contribute discriminatory information, and so were excluded from further consideration. Also excluded was the domain of neighborhood environment concerning level of traffic and existence of sidewalk adjacent to the road since these items were beyond the scope of the present study.

For each scale, a regression model was fit with the scale value at follow-up as the response and with baseline scale value, intervention arm, employee count, and presence or absence of a worksite health and wellness program prior to initiation of the PACE study as predictor variables. The effect of intervention arm in these regression models represents the difference between intervention and control worksites in the environmental characteristic after adjustment for any differences in environmental characteristics at baseline. Most scales had skewed distributions or had only a limited number of items. We did not use the usual inferential method to evaluate the intervention, since it is based on p-values and confidence intervals obtained from the regression model based on a large sample approximation, and may not be valid with the current relatively small sample of worksites. Instead we chose a robust estimation using bootstrap methods¹¹ to construct confidence intervals for the intervention effect. A robust regression method adjusting for covariates was also used¹².

Variations in scoring by rater at follow-up were evaluated for the information environment domain for both physical activity and nutrition behaviors. Values at follow-up on some scales from one rater appeared inconsistent with values observed among the other raters. An

index representing rater variation was added as an adjustment factor to one of the final models in the robust regression analyses.

Results

The companies randomized to intervention and delayed intervention (comparison) were generally similar in their characteristics, as shown in Table 2. According to the SIC codes, about half the companies were classified as manufacturing (SIC 20-39), transportation and communications (SIC 40-49), or wholesale trade (SIC 50-51). The small apparent differences in company size and existence of a wellness group or recent experience with a diet or physical activity health promotion program had overlapping confidence intervals, and therefore were deemed similar at baseline, and balanced in randomization assignment.

The eleven scales included in the analysis from the EA checklist are shown in Table 3, with some indication of how they were derived. Table 4 provides the median score, inter-quartile range and percent non-zero for each of these scales at baseline. As shown, worksites in the intervention and comparison conditions had comparable percentages of non-zero scores on these scales at baseline.

Table 5 shows the average scoring for worksites evaluated by the four different raters at follow-up, for the information environment scales. The differences do not reach statistical significance. Nonetheless, in the main analysis of the intervention effect, we chose to adjust for the contrast between rater one and the other raters in order to protect against false discovery.

Table 6 shows the percent non-zero in each scale at follow up, for both the intervention and comparison groups. The estimated intervention effect is shown, first adjusting for baseline score, company size and wellness group or recent obesigenic program. The final columns show results also adjusting for rater 1 designation versus other rater. Significant differential improvements were found in the information environment related to both nutrition and physical activity. No other environmental items changed differentially between intervention and comparison worksites.

Discussion

The EA checklist had face validity as an instrument to assess the environment in and around the worksite. It is hard to do environmental assessment in these intervention studies, but it is important, since the PACE intervention targets the environment as part of its strategies. As an instrument, the EA checklist discriminated between detected changes in environmental information and lack of differences in the physical environment at follow-up. From a program evaluation perspective, in spite of some limitations, the EA checklist was able to detect changes in the information environment, as a result of the PACE intervention, for both physical activity and healthy eating behaviors.

Our work adds to the literature on developing environmental assessments. As with any measurement tool, the instrument used in our study must have face validity, reliability, inter-rater reliability, and external validity. Our study was not able to assess all of these, but pointed up difficulties with inter-rater reliability that called for adjustment in our analyses. We discovered that small to medium sized worksites have very variable facilities, and often share buildings with other companies. This posed challenges in making the counts of bike provisions etc. comparable with other worksites.

Several groups have adopted and adapted the CHEW⁹ for use in their worksite studies, and have carefully described the construction of scales and subscales within the different

conceptual domains, using different methods to effect this. For example DeJoy et al¹³ developed a prototype for use in very large worksites. They expanded the domains beyond those in the CHEW, and allocated points to different components of those domains. Some parts of the resulting Environmental Assessment Tool (EAT) were completed by company staff, and led to multiple measures of the same worksite (location). Inter-rater reliability was high (above 80%)¹³. The same group used the EAT to inform the intervention developed for selected large companies and demonstrated considerable variability across worksites in access to physical activity opportunities and access to healthy food choices.¹⁴ Few studies have evaluated changes in the worksite environment in response to an intervention, before the results of the current studies that form the consortium of worksite obesity prevention trials become available. A report from the World Health Organization on monitoring and evaluating worksite health promotion programs¹⁵ underscores the need for such evaluations. Regrettably, work developing such an environmental checklist has proceeded differently in different studies, and the lack of consensus on the development methodology is a current limitation of this field.

Our results using the EA checklist show that our PACE intervention program significantly improved the information environment in the worksite at two year follow-up. The fact that it did not have a measurable effect on physical fitness facilities or bike provisions or stairway enhancements is disappointing but perhaps not surprising. The intervention did not emphasize making physical changes but placed emphasis on working with the available resources of the worksite and optimizing their use. Changes in the physical environment require resources on a scale not provided by this intervention, and not easily incorporated into the company budget of small to medium sized businesses. The cost of physical improvements and the labor involved are orders of magnitude greater than the provision of signage, for example. For worksites that share buildings with other companies, the shared building further limits a worksite's ability to significantly alter their physical environment, including altering the appearance of stairwells or building outdoor walking paths.

Nonetheless, it is possible, that given more elapsed time since the introduction of the PACE intervention, we will see an effect of the intervention on the EA checklist variables. As employees become more active, make more use of bicycles and use the stairs more, we could expect that they will demand more improvements in provision of bike racks, and easy access to stairways. The Importance of changes in the physical environment in relation to both physical activity and healthy eating may increase relative to individual behavior changes, as time elapses since initiation of behavior change. Sustaining long term changes in behavior requires support from the physical as well as the social environment, leading to changes in social norms.

Our study has limitations. We did not include an independent rating of the worksite environments in the same worksite in the same period, by either the same rater or different raters. We are therefore unable to estimate the reproducibility of the scales, or precisely to estimate the inter-rater reliability of the scales. No attempt has been made to evaluate the interventions according to dose of intervention delivered, or strength of the EAB, since this would violate the intent to treat principle of analysis of a randomized controlled trial. Such evaluations would be better done as a secondary analysis of individual level behavior or obesity risk variables, in a linear mixed model where there is greater statistical power.

The strengths of the study include its group randomized design, the relatively large number of independent worksites participating, the length of follow-up (two years), the partnerships between study staff and EAB members, the multilevel, phased intervention, and the multiple outcome measures used, of which the EA checklist is only one.

In summary, we discovered that the checklist is not easy to complete, and may require significant training and supervision of raters to achieve standardization of ratings. A consensus should be actively developed regarding a common methodology for environmental assessment that is appropriate for a wide range of company sizes and environmental circumstances.

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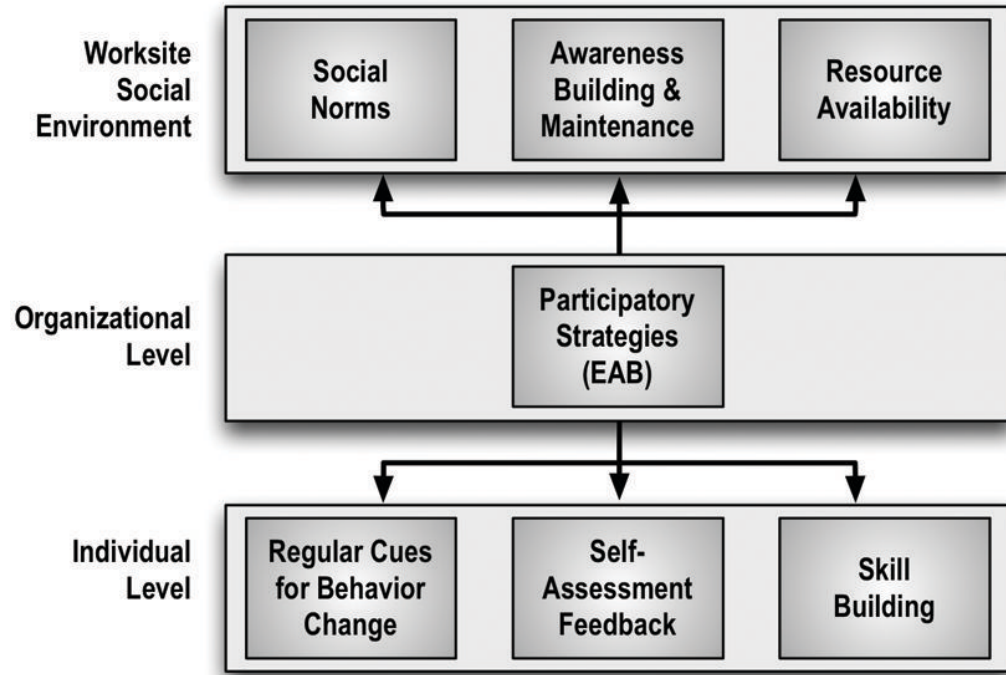


Figure 1.
Theoretical Framework for Multilevel Intervention

Table 1

Intervention, Checklist Items and Summary Indices: Worksite Environment

Construct	Intervention strategy or construct	Examples	Related subscale of EA checklist
<u>Organizational Level</u>			
Policies	<ul style="list-style-type: none"> • Worksite commitment 	<ul style="list-style-type: none"> • CEO letter to sustain the promoted behaviors into company routine 	Existence/sponsorship of weight control or physical activity programs
Structures	<ul style="list-style-type: none"> • Regular Employee Advisory Board meetings 	<ul style="list-style-type: none"> • Participation in planning worksite wide events 	/
Resources	<ul style="list-style-type: none"> • Worksite engagement 	<ul style="list-style-type: none"> • Explicit involvement with human resources and senior management 	Existence/sponsorship of weight control or physical activity programs
<u>Environmental Level</u>			
Social norms	<ul style="list-style-type: none"> • Encourage support system 	<ul style="list-style-type: none"> • Healthy Challenge • Week-long stairway campaign 	/ Stair signage
Awareness building & maintenance	<ul style="list-style-type: none"> • Constant inescapable messages 	<ul style="list-style-type: none"> • Posters, flyers • Company email reminders • Worksite wide events 	Information Environment / /
Resource availability	<ul style="list-style-type: none"> • Reference Center • Topic Boards 	<ul style="list-style-type: none"> • Kiosk • Alternatives to vending machine snacks 	/ Vending machine options
<u>Individual Level</u>			
Regular cues for behavior change	<ul style="list-style-type: none"> • Posters, flyers 	<ul style="list-style-type: none"> • Bike flyer 	Bike and rack counts
Self-assessment & feedback	<ul style="list-style-type: none"> • Goal setting • CHIPS 	<ul style="list-style-type: none"> • Website • Self-help manual 	/ /
Skill building	<ul style="list-style-type: none"> • Teach simple skills & reward behavior change 	<ul style="list-style-type: none"> • Self-help manual • Participation in worksite-wide events 	/ /

Table 2

Company Characteristics by intervention assignment

Characteristic	Intervention Mean (95% CI)	Delayed Intervention Mean (95% CI)
% manufacturing, transportation, communications, wholesale or trade companies	53% (27 to 79)	47% (21 to 74)
Company size (full-time permanent employees)	136 (103 to 169)	123 (97 to 149)
% classified as blue collar	35% (30 to 49)	27% (12 to 42)
% with jobs involving vigorous activity	8% (1 to 14)	11% (0 to 21)
% female employees	48% (37 to 60)	46% (37 to 55)
% employees who DO NOT speak English	3% (0 to 7)	1% (0 to 2)
% with current health promotion/wellness group or having had recent diet, physical activity or weight maintenance programs	53% (27 to 79)	71% (46 to 95)

Table 3

Domains, Risk behaviors and Scales from baseline (EA checklist)

Domain	Risk Behavior	Scale	Number of items	Description of composite
Physical Environment	Physical Activity	Bike and rack counts (physical count variables)	3	mean per 100 employees
		Other provisions for bikes (binary indicators)	2	sum
		Grounds: walking paths on grounds and outdoor recreation areas (binary indicators)	4	sum
		Interior facilities: fitness rooms, changing facilities, showers (binary indicators)	3	sum
	Stairwell improvements (binary indicators, from sub-list)	7	per stairwell sum	
	Nutrition	Vending machines: percent healthy choice options	4	mean
		Vending machines: percent diet soda	1	Not Applicable
Information environment	Physical Activity	Stair signage encouraging physical activity (binary indicators for each stairwell)	3	per stairwell sum
		Number of notices/posters about physical activity, exercise or sports per 100 employees	5	mean per 100 employees
	Nutrition	Number of notices/posters about healthy eating or weight loss per 100 employees	4	mean per 100 employees
Worksite resources	Both	Existence/sponsorship of weight control or physical activity programs	2 or more	Weighted sum (10 is maximum)

Table 4

Baseline scales combining intervention and comparison worksites

Domain	Characteristic	Median	Inter-quartile range	% Nonzero at Baseline	
				Intervention	Comparison
Physical Environment	Bike and rack counts	0.20	0 – 0.83	53%	59%
	Other provisions for bikes	1	0-1	65%	59%
	Grounds: walking paths, outdoor recreation areas	1	1-2	82%	88%
	Interior facilities: fitness rooms, changing facilities, and showers	2	0-2	82%	59%
	Stairwell improvements per stairwell	3.00	2.00-3.75	100%	88%
	Vending machine healthy choice options: rate per 100 slots	4.9	2.4 - 9.8	94%	100%
Information Environment	Vending machine diet soda: rate per 100 slots	22	19 – 30	100%	100%
	Stair signage per stairwell	0.0	0 – 1	47%	41%
	Number of notices/posters encouraging physical activity per 100 employees	0.28	0 – 0.67	65%	76%
Worksite Resources	Number of notices/posters encouraging a healthy diet per 100 employees	0.0	0 – 0.18	35%	18%
	Existence/sponsorship of weight control or physical activity programs	1.5	0 – 3	59%	76%

Table 5

Rater variation scoring Information Environment at follow-up

Rater	Number of companies	Stair signage	Physical activity posters	Nutrition posters
1	4	0.08 (0.17)	4.81 (6.53)	0.45 (0.90)
2	9	0.23 (0.25)	0.30 (0.36)	0.70 (1.33)
3	7	0.26 (0.30)	0.10 (0.17)	0.02 (0.05)
4	13	0.26 (0.28)	0.52 (0.52)	0.72 (0.89)
p- value		0.46	0.09	0.08

Table 6

Intervention effect for Environmental Assessment Scales

Domain	Characteristic	% non zero at follow-up		Intervention effect [†]	95% Confidence limits	Intervention effect [#]	95% Confidence limits
		Intervention	Comparison				
Physical Environment	Bike and rack counts	71%	88%	0.13	-0.32,1.14	0.14	-0.36,1.21
	Other provisions for bikes	24%	31%	0.24	-0.15,0.68	0.24	-0.14,0.67
	Grounds	100%	94%	0.09	-0.61,0.74	0.09	-0.65,0.75
	Interior facilities	65%	81%	-0.11	-0.47,0.35	-0.11	-0.48,0.42
	Stairwell improvements (high category)	82%	100%	-0.33	-1.42,1.65	-0.56	-1.57,1.61
	Vending machine healthy choice options per 100 slots	100%	93%	1.4	-5.3,9.3	0.1	-8.1,9.6
Information Environment	Vending machine diet soda rate	100%	100%	0.0	-5.0,5.3	0.6	-5.4,5.6
	Stair signage per stairwell	53%	56%	0.25	-0.30,0.70	0.26	-0.45,0.96
	Number of notices/posters encouraging physical activity per 100 employees (high category)	47%	75%	0.39*	0.03,0.92	0.33*	0.00,0.85
Worksite Resources	Number of notices/posters encouraging a healthy diet per 100 employees [‡]	12%	69%	0.37*	0.00,1.49	0.40*	0.00,1.46
	Existence/sponsorship of weight control or physical activity programs	76%	75%	-0.11	-1.34,0.73	-0.10	-1.26,1.07

[†] adjusted for baseline, company size and wellness group or recent obesigenic programs.

[#] adjusted for effects previously noted and indicator of rater number

* P<0.05