

# **Design Characteristics of Worksite Environmental Interventions for Obesity Prevention**

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## **ABSTRACT**

**Objective:** This paper describes the design characteristics of the National Heart, Lung, and Blood Institute-funded studies that are testing innovative environmental interventions for weight control and obesity prevention at worksites.

**Research Methods and Procedures:** A total of 114 worksites (~ 48,000 employees) from 7 separate studies were randomly assigned to intervention or comparison groups. The worksite settings include hotels, hospitals, manufacturing facilities, businesses, schools, and bus garages located across the United States. Each study uses its own conceptual model drawn from the literature and includes the socio-ecological model for health promotion, the epidemiologic triad and those integrating organizational and social contexts. The interventions, which are offered to all employees, include environmental- and individual-level approaches to improve physical activity and promote healthful eating practices. Environmental strategies include reducing portion sizes, modifying cafeteria recipes to lower their fat contents, and increasing the accessibility of fitness equipment at the workplace. About 48% (N=23,000) of the population is randomly selected for measurements. The primary outcome measure is change in BMI or body weight after two years of intervention. Secondary measures include waist circumference, objective and self-report measures of physical activity, dietary intake, changes in vending machines and cafeteria food offerings, work productivity, health care utilization, and return on investment.

**Summary:** The results of these studies could have important implications for the design and implementation of worksite overweight and obesity control programs. (*Obesity* 2007;15(9):2171-2180)

## **Assessing environmental supports for healthy behaviors: The Environmental Assessment Tool**

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## **Abstract**

**Objective:** To describe the development, reliability, and validity of the Environmental Assessment Tool (EAT) for assessing worksite physical and social environmental support for obesity prevention.

**Methods:** The EAT was developed using a multi-step process. Inter-rater reliability was estimated via Kappa and other measures. Concurrent and predictive validity were estimated using site-level correlations and person-level multiple regression analyses comparing EAT scores and employee absenteeism and healthcare expenditures.

**Results:** Results show high inter-rater reliability and concurrent validity for many measures and predictive validity for absenteeism expenditures.

**Conclusions:** The primary use of the EAT is as a physical and social environment assessment tool for worksite obesity prevention efforts. It can be used as a reliable and valid means to estimate relationships between environmental interventions and absenteeism and medical expenditures, provided those expenditures are for the same year that the EAT is administered. (*J Occup Environ Med.* 2008;50:126-137)

## **Assessing Management Support for Worksite Health Promotion: Psychometric Analysis of the Leading by Example (LBE) Instrument**

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### **ABSTRACT**

**Purpose.** Describe the development of the leading by example (LBE) instrument.

**Methods.** A total of 135 responses from employees of a private corporation working at 11 different worksites were factor analyzed in 2005. Exploratory factor analysis was used to obtain an initial factor structure. Factor validity was evaluated using confirmatory factor analysis methods. A second sample was collected in 2006 from the same population (N = 178) and was used to confirm the factor structure via confirmatory factor analysis. Cronbach's  $\alpha$  and item-total correlations provided information on the reliability of the factor subscales.

**Results.** Four subscales were identified: business alignment with health promotion objectives, awareness of the health-productivity link, worksite support for health promotion, and leadership support for health promotion. Factor by group comparisons revealed that the initial factor structure was effective in detecting differences in organizational support for health promotion across different employee groups.

**Conclusions.** Management support for health promotion can be assessed using the LBE, a brief, self-report questionnaire. Researchers can use the LBE to diagnose, track, and evaluate worksite health promotion programs. (AJHP 2008;22(5):359-367)