

WORKSITE HEALTH PROMOTION

TABLE: Best Practice Design Principles for Worksite Health Promotion Programs

1	Leadership	Elements that set the vision for the program, assign accountability, ensure structural support for the program, engage leaders throughout the organization, set appropriate organizational policy to support health, and support the program's need for resources.
2	Relevance	Elements that address factors critical to participation and engagement of employees and their families in the various program options. Relevance reflects the degree to which program options apply to the needs and interests of workers and their families. It is assumed that relevance is a critical factor in long-term engagement of employees.
3	Partnership	Elements that relate to efforts designed to integrate with multiple stakeholders, including individual workers, employees as a population (representation), organized labor, community organizations, vendor companies, and other internal partners.
4	Comprehensiveness	Elements that, taken together, meet the definition of a comprehensive program and include health education, supportive physical and social environments, integration of the worksite program into the organization's structure, linkage to related programs, and worksite screening programs.
5	Implementation	Elements that ensure a planned, coordinated, and fully executed implementation of health management programs, including ongoing monitoring and designated staff with clearly delineated accountabilities.
6	Engagement	Elements that promote respect throughout the organization, build trust, facilitate program co-ownership through participatory principles, ensure worker representation in decision-making processes, provide meaningful incentives that leverage intrinsic motivation and fit the company culture, and create a workplace environment in which health management programs thrive.
7	Communications	Elements that indicate the presence of a formal communication strategy that includes a branding approach for program visibility, ongoing communications using multiple delivery channels, and targeted and tailored messaging designed to reach specific subgroups.
8	Data driven	Elements that represent the importance of informed decision making and provide guidance through ongoing measurement, evaluation, reporting, and analytics. Data need to be shared appropriately with other vendors for program integration purposes as well as to address comprehensive reporting needs. Not only is it important to ensure that data representing program experiences are relevant, clean, and representative, but also that they drive continuous program improvement.
9	Compliance	Elements that ensure the health management program meets regulatory and ethical requirements and safeguards individual-level data. Compliance may be considered a cornerstone element; without it, doubt may be cast on the ethical and legal status of the health management program.

From Pronk NP. *ACSMs Health Fit J.* 2014;18 (1):42-6. Reprinted with permission.

approximately 7% to 8% income from operations over the course of 5 years of evaluation (6). Another example in the use of these principles is HealthPartners, where each of 14 business units evaluated themselves against all principles and correlated the scores against the health risks in their respective populations. A significant trend was noted, indicating that the higher the best practice score, the lower the population health risk (see Figure) (7).

OUTCOMES OF CHOICE

Whether or not worksite health promotion programs are considered effective also is dependent on the choice of outcomes. There is a host of outcomes leaders can pick from. These include, but are not limited to:

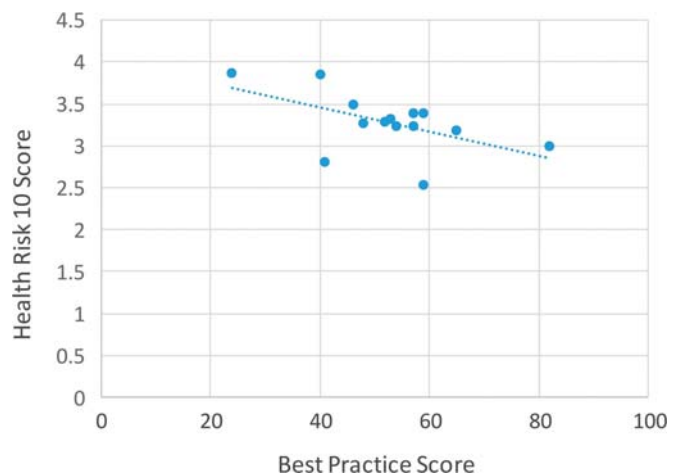
-*Health promotion and disease prevention.* These include lifestyle behaviors such as physical activity, tobacco cessation, and sleep as well as prevention of chronic conditions such as diabetes and heart disease or hypertension and high cholesterol.

-*Participation.* Does the workforce engage in the program and through their participation express interest and appreciation?

-*Work Ability.* This refers to a comprehensive and contemporary approach to understanding and managing well being in the

workplace. Work ability goes beyond traditional workplace interventions by assisting individuals to manage their own well

Figure. Adherence to Best Practice Principles of Design and Population Health Risk. From Pronk NP, et al. *Our health, our business.* Global CMO Network. 2016. Reprinted with permission.



being, now and in the future, to make sure workers are able to work at their best and retire healthy.

-Productivity and performance. This includes absenteeism, presenteeism, and overall productivity.

-Retention of talent. What is the role of the program in keeping the company's best talent from leaving the organization?

-Attraction of talent. How important is it for the company to offer programs that help employees maintain or improve their health?

-Return on investment. Does the program generate enough value to offset its cost?

-Community relationships. How does the program interact and align with issues that affect the community or address important community issues?

EVIDENCE OF EFFECTIVENESS

Clearly, whether or not programs work relates heavily on the confidence that such programs generate an effect in terms of changes from baseline. If studies support the notion that a certain intervention generates an impact that is different from doing nothing or carrying on with “business as usual,” we can infer that there is evidence of an effect. There are various ways of considering the strength of the evidence of effectiveness; some of the approaches are discussed here.

Systematic reviews: Systematic reviews refer to comprehensive reviews of all the evidence on a specific topic. Several systematic reviews have been conducted related to worksite health promotion programs. One of the most rigorous reviews was conducted by the Community Preventive Services Task Force and concluded that well-designed programs work. This review reported positive outcomes for physical activity, smoking, alcohol, seat belt use, blood pressure, cholesterol, health care use, and productivity (1). It also noted a positive economic impact. However, not all systematic reviews show positive outcomes *per se*. A review on economic impact of wellness programs conducted by the Tufts University Medical Center in Boston showed that only 3 of the 10 studies identified analyzed direct and indirect costs. Evidence regarding economic impact was, as a result, limited and inconsistent (11). Therefore, the manner in which the review is conducted and the criteria used to include or exclude specific studies are important to keep in mind.

Randomized trials: A randomized controlled trial (RCT) is a scientific experiment that tests the effectiveness of treatments by randomly allocating subjects to two or more groups, treating them differently, and then comparing them with respect to a measured response. They are generally considered the “gold standard” of causal inference scientific studies, but they are notoriously difficult to implement in the workplace setting. They show a high degree of internal validity and therefore lots of confidence in the findings, but they have low generalizability and are therefore difficult to translate into practice. Despite the difficulty in applying RCTs to the workplace, there are important RCTs to consider in the review of evidence of what works. For example, recent RCTs reported in the *Lancet Public Health* show

that the use of treadmill workstations resulted in a statistically significant but smaller-than-expected increase in daily walking time in Sweden (12). Financial incentives in addition to a smoking cessation group training program significantly increased long-term smoking abstinence in The Netherlands (13). Moreover, a 6-month exercise-focused intervention using telemonitoring systems reduced metabolic syndrome severity at a Volkswagen factory in Germany. This form of intervention showed significant potential to reduce disease risk, while also improving mental health, workability, and productivity-related outcomes for employees at high risk for cardiovascular and metabolic disease (14). An example of an RCT testing the impact of a multicomponent program in the United States that was not designed according to contemporary best practice design principles showed self-reported improvements in exercise and weight management behaviors after 1 year, but no impact on clinical measures of health, care expenditures, or employment outcomes (15). Although this is a very strong study from a research methods perspective, the intervention was not designed to generate large effects, supporting the argument that program design, as discussed above, is a critical consideration in worksite health promotion.

Quasi-experimental studies: This study design refers to investigations without the random assignment of participants to conditions. Among the important types of quasi-experimental studies are non-equivalent group designs, pretest-posttest, and interrupted time series designs. There are many quasi-experimental studies available in the research literature, and they are useful as supporting evidence but difficult to use for causal inference. They certainly are helpful in exploring relationships and new lines of inquiry. Across the board, these studies tend to be supportive of positive impact. However, we need to be cautious in that assessment because of the notion of “publication bias,” which tends to err on the side of positive findings.

Case studies: A case study is a research strategy and an empirical inquiry that investigates a phenomenon within its real-life context. They include in-depth investigations of a single person, group, event, or community and consider data gathered from a variety of sources while deploying several different methods (quantitative and qualitative). Case studies gather information on context and rationale and in that way support understanding of complex social phenomena. It is because of these features that case studies are highly relevant to worksite health promotion efforts where no two companies are exactly alike. In the context of business, case studies are a well-accepted, highly relevant research methodology. To highlight this, two recent reports describe in depth the experience of a single company over the course of 8 years. This case study provides a great example of a pragmatic evaluation approach as an appropriate research methodology for a single company and one that is well documented in the literature.

CASE STUDY FROM THE FIELD

Stora Enso Metsä is a wood supply company in Finland (9,10). Its main business is to buy, harvest, and transport wood for Stora

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Enso mills throughout Finland. Approximately 100 business units across Finland provide employment to approximately 550 to 650 employees. A prospective study was designed in which the worksite health promotion program was created according to the nine best practice principles outlined in the Table, and follow-up data collection was implemented over the ensuing 8 years (9,10). This case study shows a triangulation of data based on: 1) evidence-informed design according to best practices; 2) regular updates on progress using indicators valued by the company; and 3) a narrative that relates the experiences of participants and the organization aligned with the timeline involved. Using conservative practical pragmatic evaluation, this program shows net-positive impact that was considered “reasonable” after 8 years of iterative program implementation. Future research will quantify the observed positive gains in population health and economic impact for the company.

TAKEAWAYS AND CONCLUSIONS

What works in worksite health promotion? Well, in general, it appears that a comprehensive, multicomponent program designed to adhere to as many best practice principles as possible is more likely to work than programs that are not. Programs need enough time to implement the interventions, to get the workforce to engage, and to iteratively improve based on feedback and evaluations. It also makes sense to measure a few, carefully selected but highly relevant measures that are critical in practice and can be used strategically to evaluate progress.

So, do worksite health promotion programs work? Yes, but it depends on how they are designed. What makes them work? Depends again, but well-designed evidence-informed programs can improve health and well being, save money, generate a positive culture at the workplace, and be an important asset to community health. The triangulation of various indicators can build confidence in results — when we see programs that are designed according to the best practice principles and evidence of effectiveness, provide evaluations that show outcomes and progress using indicators with known validity, and are supported by case studies that provide insights into participation and experience (of the workforce and the organization), implementation process, and timelines that align interventions and outcomes, we can have a strong degree of confidence that these programs work.

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Nico P. Pronk, Ph.D., M.A., FACS, FAWHP, is president of the HealthPartners Institute and chief science officer at HealthPartners in Minneapolis, Minnesota. Dr. Pronk holds adjunct professor positions in Social and Behavioral Sciences at the Harvard University School of Public Health and in Health Policy and Management at the University of Minnesota School of Public Health.

Dr. Pronk served as cochair for the Secretary’s Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2030 (aka, Healthy People 2030). He is past-president of the International Association for Worksite Health Promotion (IAWHP); an ACSM Affiliate Society; coauthor of the IAWHP Online Certificate Course; editor of ACSM’s Worksite Health Handbook, 2nd edition; and associate editor for the ACSM’s Health & Fitness Journal®.