How Well Do Healthy Workplace Programs Work?—The Evidence

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Health Plan
More than 1.8 million members

Care System
More than 1.2 million medical & dental patients

<table>
<thead>
<tr>
<th>Care Group</th>
<th>Dental Group</th>
<th>8 Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>55+ Medical Clinics</td>
<td>25 Dental Clinics</td>
<td>Twin Cities</td>
</tr>
<tr>
<td>1,800 physicians</td>
<td>77 dentists</td>
<td>Western Wisconsin</td>
</tr>
<tr>
<td>900 clinicians</td>
<td></td>
<td></td>
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<tr>
<td>55 specialties</td>
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Research & Education
The HealthPartners Institute conducts hundreds of research studies annually while providing education and training for medical students, clinicians and patients.
Agenda

• How well do Healthy Workplace programs work?
• What does effectiveness depend on?
  – A look at the evidence
    • Systematic reviews
    • Randomized trials
    • Quasi-experimental studies
    • Case studies in business

• Best practice design principles
• Take-away’s
How well do Healthy Workplace programs work?

• “How well do healthy workplace programs work?” is a different question than “do healthy workplace programs work?”

Question 1: “do they work?”
Question 2: “If they do, how well do they work?”

Answer: “it depends!”
What does “it depend” on?

**Program Design**

<table>
<thead>
<tr>
<th>Comprehensive</th>
<th>Comprehensive</th>
<th>Not comprehensive</th>
<th>Single program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term, multi-year program</td>
<td>Short-term, single-year program</td>
<td>Lacking best practice design</td>
<td>Lacking best practice design</td>
</tr>
<tr>
<td>Reflecting best practice design principles</td>
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Note: “**comprehensive**” is defined by Healthy People 2010 as including health education, supportive physical and social environments, integration of the worksite program into the organization’s structure, and worksite screening programs. “**Best practice design principles**” include leadership, relevance, partnership, comprehensiveness, implementation, engagement, communications, data-driven, and compliance.
After adjustment to compare 2004 to 2017, comprehensive program were noted in 6.9% vs. 17.1%.

Note: A = supportive physical and social environments, B = linkages to related programs, C = health education, D = integration of the worksite program into the organization’s structure, and E = worksite screening programs.
Workplace Health in America Survey 2017

Comprehensive Program Odds

<table>
<thead>
<tr>
<th>Odds</th>
<th>Person assigned</th>
<th>annual budget</th>
<th>Program &gt;5 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.14</td>
<td>6.99</td>
<td>3.08</td>
<td></td>
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</tbody>
</table>
What else does “it depend” on?

Outcomes of Choice

- **Health promotion and disease prevention**
- **Participation**

- **Workability**
  - Current work ability compared with lifetime best;
  - Work ability in relation to the demands of the job;
  - Number of diagnosed illnesses or limiting conditions from which they suffer;
  - Estimated impairment owing to diseases/illnesses or limiting conditions;
  - Amount of sick leave they have taken during the last year;
  - Own prognosis of work ability in 2 years’ time.

- **Productivity and performance**
  - Absenteeism
  - Presenteeism
  - Overall

- **Retention, attraction of talent**
- **Return on investment**

- **Outcomes that reflect health and well-being at the personal and social level**
  - Broad set of outcomes that go far beyond the walls of the workplace itself
# Evidence of Effectiveness

<table>
<thead>
<tr>
<th>Method</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systematic reviews</td>
<td>A comprehensive review of all the evidence on a specific topic</td>
</tr>
<tr>
<td>Randomized trials</td>
<td>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</td>
</tr>
<tr>
<td>Quasi-experimental studies</td>
<td>A study without the random assignment of participants to conditions. Among the important types are nonequivalent groups designs, pretest-posttest, and interrupted time-series designs.</td>
</tr>
<tr>
<td>Case studies</td>
<td>A case study is a research strategy and an empirical inquiry that investigates a phenomenon within its real-life context</td>
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</tbody>
</table>
Systematic Reviews

• Community Preventive Services Task Force, 2010
  *CDC supported review with Task Force recommendations, Atlanta, USA*
  – Well-designed programs work—positive outcomes for activity, smoking, alcohol, seat belt use, blood pressure, cholesterol, health care use, and productivity

• Economic impact of wellness programs, 2010
  *Harvard University School of Public Health, Boston, USA*
  – Medical costs fall by about $3.27 for every dollar spent on wellness programs and absenteeism costs fall by about $2.73 for every dollar spent
Systematic Reviews

• Economic impact of wellness programs, 2013
  *Tufts Medical Center, Boston, USA*
  – Of 10 studies identified, only 3 analyzed direct and indirect costs—Evidence regarding economic impact is limited and inconsistent

• Evidence on impact of programs to address musculoskeletal, psychological, and behavioral disorders, and economic evaluations, 2019
  *Institute for medical Informatics, Biometry, and Epidemiology, University Hospital of Essen, Germany*
  – CBT programs, job-stress management, and stretching programs work—multi-component programs are preferred. Employers should expand organizational level programs
Randomized Trials

• Generally considered the “gold standard” of causal inference scientific studies
• Notoriously difficult to conduct in the workplace setting
• High degree of internal validity, but low generalizability
• However, well-designed RCTs continue to generate evidence that supports the influence of (public) health on workplace-relevant outcomes
Randomized Trials

For example, recent RCTs, published in 2018 and 2019 in the Lancet Public Health, show:

• Treadmill workstations result in a statistically significant but smaller-than-expected increase in daily walking time [Sweden]

• Financial incentives in addition to a smoking cessation group training program can significantly increase long-term smoking abstinence [The Netherlands]

• 6-month exercise-focused intervention using telemonitoring systems reduced metabolic syndrome severity. This form of intervention shows significant potential to reduce disease risk, while also improving mental health, work ability, and productivity-related outcomes for employees at high risk for cardiovascular and metabolic disease [Germany]
Randomized Trials

In addition:

- Exercise intervention improves work ability in office workers [Australia]
- Total Worker Health intervention for construction workers impacts safety, health and well-being outcomes [USA]
  - Exercise frequency
  - Healthy diet improvement/sugary snack reduction
  - Team cohesion
  - Sleep duration
  - Blood pressure reduction
Randomized Trials

But also:
Multicomponent workplace wellness program resembling programs offered by US employers [USA]
However, this was not a comprehensive program designed according to best practice design principles!

- Large US warehouse retail company
- Intervention of 8 modules for healthy lifestyles
- Observation period of 1 year
- Improvements in exercise and weight management behaviors,
- No impact on clinical measures of health, health care expenditures, or employment outcomes
Quasi-experimental studies

- Many reports in the literature
- Useful as supporting evidence, but difficult to use for causal inference
- Helpful in exploring relationships and new lines of inquiry
- These studies tend to be largely supportive of positive impact
Case Studies and Best Practices

- In-depth investigations of a single person, group, event, or community
- Data gathered from a variety of sources and using several different methods (quantitative, qualitative)
- Helps gather information on context and rationale
- Supports understanding of complex social phenomena
Best Practice Design Principles

- Based on review of evidence, 41 best practices identified and categorized into 9 principles of design
- Best practice principles for program design:
  - Leadership
  - Relevance
  - Partnership
  - Comprehensiveness
  - Implementation
  - Engagement
  - Communications
  - Being data-driven
  - Compliance

<table>
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<th>Dimension</th>
<th>Definition</th>
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<td>Leadership</td>
<td>Elements that reflect program vision, organizational policy, resources, and implementation support</td>
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<tr>
<td>Relevance</td>
<td>Elements that address factors critical to program participation and connecting to the intrinsic motivation of workers</td>
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<tr>
<td>Partnership</td>
<td>Elements that relate to integration of efforts with other groups or entities, such as unions, other internal departments, external vendors, and community organizations, among others</td>
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<td>Comprehensiveness</td>
<td>Programming that includes 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 (based on Healthy People 2020)</td>
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<tr>
<td>Implementation</td>
<td>Elements that ensure a planned, coordinated, and fully executed work plan and process-tracking system</td>
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<td>Engagement</td>
<td>Elements that promote ongoing connections between employees and the program through activities and behaviors that build trust, respect, and an overall culture of health and well-being</td>
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<tr>
<td>Communications</td>
<td>Elements that reflect a strategic communications plan that maintains high visibility and recognition</td>
</tr>
<tr>
<td>Being data-driven</td>
<td>Elements that ensure program measurement, reporting, evaluation, and continuous improvement</td>
</tr>
<tr>
<td>Compliance</td>
<td>Elements that ensure the program meets regulatory requirements and protects the personal information of employees and participants</td>
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Source: ACSM’s Health & Fitness Journal 2014;18(1):42-6
Best Practice Design Principles

• Adopted and adapted by the American Heart Association’s Life Simple 7 initiative
• Applied as a best practice model with proven, published outcomes
  – TURCK
  – Slippery Rock University
  – Indiana University
  – HealthPartners (Regions Hospital)
Design Principles and Health Risks

*Assessment Results Across 14 HealthPartners Major Business Divisions*

The higher the Best Practice Program Design Assessment score, the fewer health risks in the population.

Regions Hospital “Be Well”

“The big idea was to start small, listen with intent for expressed needs of people, engage employees from the beginning, and making them the power behind a healthy, productive and high-performing workplace.”

These data reflect financial cumulative medical and pharmacy savings of $9.3 million and productivity-related savings of $19.2 million (total of $28.5 million) over 7 years.
TURCK experience

Following an analysis of a 10-year healthy workplace program experience for this manufacturing company:

- 93% of employees indicate they give their best effort each day
- <1% turnover compared to an industry average of 13%
- 69% reduction in behavioral health visits
- Sustained decrease in FMLA claims since 2003
- $4.7 million in health care costs avoided between 2008 and 2013
- Increased employee volunteerism and donations to a personally meaningful cause

“strong and sustained financial performance of the program has moved from a breakeven trend between 2003-2008 to approximately 7% to 8% income from operations during each of the past 5 years.”

-Dave Lagerstrom, CEO, TURCK
What to Measure?

4Ss and PIPE Impact Metric

• A practice-based impact monitoring approach
• Successfully used in evaluation of diabetes prevention programs in the real-world [Finland, Australia]
• Recently applied to the workplace health setting [Finland]
  – Stora Enso Metsä wood supply company
  – Comprehensive program
  – 8 year implementation
  – 4Ss and PIPE Impact metric iteratively applied
4Ss and PIPE Impact Metric

Design
- Size
  - Scope
    - Scalability
      - Sustainability

Impact
- Penetration
  - Implementation
    - Participation
      - Effectiveness
  - Program Rollout
Stora Enso Metsä Wood Supply Company

- 86% employee HRA completion rate
- 80% biometric screening completion
- 58% participation (2 HRA + biometrics) rate
- **Successful** participant rate: 21% (23% in 2010-2014 and 18% in 2014-2017)
  - Success reflects having made a lifestyle change AND improved biometric data
- PIPE Impact scores:
  - 2010-2014 = 18%
  - 2014-2017 = 14%
Take-Away’s

• Favorable approaches include:
  – multicomponent interventions
  – Comprehensive interventions
  – Balanced targeting of working conditions and behaviors addressing both safety and health (i.e., Total Worker Health approach)
  – Application of best practice design principles
  – Measurement of a few, carefully selected metrics easily implemented in practice
So, to answer the questions…

• Do healthy workplace program work?
  – Yes, but it depends on how they are designed

• How well do they work?
  – Depends again, but in general, well-designed comprehensive programs can improve health and well-being, save money, generate a positive culture at the workplace, and be an important element in improving community health and vitality
Thank you

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