HTAi 2018 ANNUAL MEETING Vancouver CANADA

Economic Benefit of Workplace Health Promotion – What is the evidence ?

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Background

Maintaining people's ability to work is a priority in many European countries. Through healthier employees, companies should benefit from lower absenteeism and increased productivity. Public sector expects savings of health care costs, increasing employment rate and avoiding early retirement. Employees benefit from improving their health and well-being.

Objective

The question arises whether economic benefits of workplace health promotion are proven and how their results can be assessed.

Method

- systematic literature search, electronic databases (Medline, NHSEED) and handsearch; 2007– 2014
- included studies: systematic reviews, meta-analyses, economic models
- predefined inclusion and exclusion criteria (e.g. RCT's and NRS, presentation of outcomes, use of quality checklists..) -> Deviation was necessary because no studies would have remained

Results

- 389 abstracts identified, 2 meta-analysis with 84 primary studies, 3 systematic reviews with 36 primary studies and one economic model with 6 primary studies remained for inclusion
- Few economic studies, often with inadequate methodological quality. Most studies are from USA, only few from Europe - primarily in the Scandinavian countries.
- Available studies, who could quantify the economic benefit, showing a positive return on investment or savings of health care costs - however with a wide range.
- Benefits for the health and social services have been proven in an economic model - based on one/two highly effective primary studies.

Results of selected examples

Author/study designs/countries	Worksite Interventions	Main Results
Chapman L. S. (2012)2 Meta-Analysis - 62 studies, RCT's/NRS, pre-/post USA	Combination of at least 3 interventions like smoking prevention, fitness, nutrition, stress management, blood pressure controls, cholesterol reduction…	**% Change sick leave absenteeism** reported in 26 studies Ø – 25.10 % (variation: –9.3 to -68.2 %) **% Change health costs:** reported in 32 studies Ø – 24.5 % (variation -3.7 to –50.10 %) **Return on Investment (ROI):** reported in 25 studies Ø 5.56 USD (variation 2.51 to 19.41 %)
Dongen van et al. (2012)6 Systematic review – 10 studies, 7 RCT's, 3 NRS USA 5, NL 3, DK 1, AUT 1	Nutrition programs Nutrition- and physical activities programs	Nutrition programs: 2 of 4 studies interventions costs; with 43 USD respectively 20 USD per kilogram of weight loss Nutrition and Physical activities: 3 of 6 studies interventions costs – pooling was not possible (different outcomes, follow ups, perspective
Baicker K et al. (2010)1 Meta-Analysis – 22 studies, 9 RCT's, 6 NRS, 7 pre-/post USA	Information material, individual counselling, seminars, group activities, incentives participation weight loss programs, fitness, smoking cessation, multiple risk factors	**Health Costs:** Ø Savings per employee/year: 358 USD Ø Costs for employer/year: 144 USD **Return on Investment (ROI):** 3.27 USD
EAHC, Matrix share our insight (May 2013)3 Economic Model based on one primary study with effect size of -34 % depression	Job improvement based on risk factors for depression, training, workshops Target group: universal	**Return on Investment (ROI):** Healthcare: 2,94 Social system: 0,47 Economy: 5,03 Employer: 3,36 Total: 11.79 Program costs per person Euro 16.0
Tompa et al. (2009)5 16 studies, all study designs included USA: 10, CAN 2, AUT 2, SW 1, NL 1	Ergonomic measures (participative teams, training, ergonomic furniture, etc.)	Strong evidence that ergonomic interventions bring financial benefits to employers (especially in production and warehousing); for participatory methods - 4 studies - moderate evidence, for financial benefits, quantification was not possible

AUT = Australia, CAN = Canada, DK = Denmark, NL = The Netherlands, SW = Sweden, USA United States of America, NRS = non randomized study, RCT = randomized controlled study, ROI = Return on investment,

Discussion/Conclusion

Positive results must be interpreted with caution. They could be under- as well as overestimated.

There is a lack of good primary studies on effectiveness of interventions on which economic analyses could rely. It seems that there is an overall low priority on financing of public health/prevention interventions and economic evaluation. A positive aspect is the increasing number of effectiveness studies in recent years.

Methodological quality and comparability of economic analyses could still be improved (different outcome measures, follow up time, discounting, included costs and benefits, perspective of the evaluation..).

The transferability of the results is often limited e.g. due to different health care systems.

A lot more work needed to be done like improving the underlying effectiveness evidence, incorporate also equity issues, standardize the economic methods and develop better modelling approaches.

References

1. Baicker, K.; Cutler, D.; Song, Z. (2010): Workplace wellness programs can generate savings. In: Health Affairs (Millwood) 29/2:304-311
2. Chapman, Larry S. (2012): Meta-Evaluation of Worksite Health Promotion Economic Return Studies: 2012 Update. In: The Art of Health Promotion 1-13
3. MATRIX (2013): Economic analysis of workplace mental health promotion and mental disorder prevention programmes and of their potential contribution to EU health, social and economic policy objectives. MATRIX - Executive Agency for Health and Consumers
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5. Tompa, E.; Dolinschi, R.; De Oliveira, C.; Irvin, E. (2009): A systematic review of occupational health and safety interventions with economic analyses. In: Journal of Occupational and Environmental Medicine 51/9:1004-1023
6. Van Dongen, J. M.; Proper, K. I.; van Wier, M. F.; van der Beek, A. J.; Bongers, P. M.; van Mechelen, W.; van Tulder, M. W. (2012): A systematic review of the cost-effectiveness of worksite physical activity and/or nutrition programs. In: Scand J Work Environ Health

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