

# Development of an e-health program for self-management of stress related problems

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## Introduction

Work related stressors have been shown to increase the risk of depression, cardiovascular disease and musculoskeletal pain. In Europe, every fourth worker is exposed to high work related stress.

Stress related problems could be reduced by self-management, e. g. through web-based programs. In order to change a stress-related behavior more permanently there is a need for more advanced systems for behavioral change than those existing.

## Objective

The objective is to develop evidence based, tailored and interactive e-health program for self-management of stress related problems

## Methods

The development of the e-health program consist of three steps

The first step:

- Review of existing evidence of behavior change and stress-management techniques.

The second step:

- Individualize the program to each user
- Screen depression and stress levels
- Decisions about the health psychological theoretical basis
- Discussions with experts within behavioural change area

The third step:

- Consult experts in the innovation field, design and engineering with focus on graphic design, interfaces and pedagogical design.

## Design process

- The development of the e-health program is based on the Transactional Theory of Stress and Coping, Social Cognitive Theory and the Transtheoretical Model and Stages of Change.
- Self-monitoring, prompt formulation of intention to change, specific goal setting, feedback on performance and reevaluation of goals are considered as central techniques for behavior change.
- Seven techniques for stress-management has been included: physical activity, stimulus control and sleep restriction to improve sleep, time-management, pleasant activity scheduling, progressive relaxation, change negative thinking and assertiveness training.
- After screening for depression and anxiety to exclude persons with more severe problems the users will go through psycho education on stress and are guided how to analyze stress-related behavior with ABC-model.
- The individualization contains investigation of readiness of behaviour change their, application of the stress-management techniques, and creation of an individual solution.
- The program generates automatic feedback through messages, tables and visual and audio cues.
- Relapse prevention and support for maintenance of behavior with support of others is included as the last part of the program.
- Information is delivered to the users trough text, audio and slideshows.

## Discussion & Conclusions

Evidence for all techniques were found, both regarding behavior change and stress-management. Individualization, feedback and pedagogical design may prevent dropouts and also more permanently change health related behaviors influencing lifestyle factors for a better health.

## Recommendations

Tailored, evidence based self-management program delivered via the web can approach the essential elements for the right to health identified by The United Nations; availability, accessibility, acceptability and good quality.



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Screendump from the web-based self-management program © Olle Hällman

