Facilitation of Goal-Setting and Follow-Up in an Internet Intervention for Health and Wellness

Kirsikka Kaipainen¹, Elina Mattila¹, Marja-Liisa Kinnunen², and Ilkka Korhonen¹

¹ VTT Technical Research Center of Finland, P.O. Box 1300, FI-33101 Tampere, Finland
² University of Jyväskylä, Department of Psychology, P.O. Box 35, FI-40014 University of Jyväskylä, Finland


Abstract. Chronic work-related stress and insufficient recovery from workload can gradually lead to problems with mental and physical health. Resources in healthcare are limited especially for preventive treatment, but low-cost support can be provided by Internet-based behavior change interventions. This paper describes the design of an Internet intervention which supports working-age people in managing and preventing stress-related health and wellness problems. The intervention is designed for early prevention and aims to motivate individuals to take responsibility for their own well-being. It allows them to choose the approach to take to address personally significant issues, while guiding them through the process. The first iteration of the intervention was evaluated with three user groups and subsequently improved based on the user experiences to be more persuasive, motivating and better suited for independent use. Goal setting and follow-up were especially enhanced, tunneled structure improved, and the threshold of use lowered.

Keywords: Internet intervention, computer-aided cognitive behavioral therapy, behavior change, goal-setting, stress, well-being.

1 Introduction

Stress and work exhaustion are taking their toll on the mental well-being of working age population in Western countries. It is estimated that one in four people suffers from mental health problems at some point in their lives [1], and it is likely that the number is increasing. Prolonged stress, coupled with insufficient recovery from workload, can elevate the risk of cardiovascular diseases [2,3] and expose to mental disorders such as depression. High job strain has been shown to predict subsequent work disability pension [4], and work-related mental health problems are the leading cause of sick leave and disability in OECD countries [5]. Depression is expected to be the disorder with the highest disease burden in high-income countries by the year 2030 [6]. Since there are insufficient resources in healthcare to treat these problems before they escalate [1,7], there is a need for novel treatment methods which can be used independently or with minimal professional support and be taken into use when the symptoms are still mild.
Internet interventions offer a partial solution to the scarcity of healthcare resources. Access to web-based resources is mostly independent of time and place [7]. Moreover, the possibility of self-management can empower individuals to better master their own well-being. Digital intervention methods may lower the barrier to seek help by assuring anonymity for those who, in fear of stigma, do not wish to attend face-to-face therapy [7]. Internet interventions are gaining acceptance as an alternate treatment to face-to-face therapy; for example, in the United Kingdom, some web-based systems are recommended for treatment of depression and anxiety [8].

Computerized and Internet-based interventions for mental and physical health problems are becoming commonplace and are subject to extensive research [7]. Several Internet interventions have been shown to have positive effects in the treatment of various problems, including depression, anxiety, stress, insomnia, and weight management [9], and the effectiveness of Internet-based therapy in general is comparable to face-to-face interventions [10]. Out of the possible therapeutic approaches employed online, cognitive-behavioral therapy (CBT) has been the most effective [10]. However, many studies report high attrition rates [9] and it is unclear whether this is caused by the intervention design, characteristics of participants, or some other factors. There is a lack of reports describing the detailed development of interventions and their methods, making it difficult to assess particular design decisions. Moreover, persuasive design strategies seem to have been systematically utilized in relatively few interventions [11], although propositions on design practices have been made [12]. Persuasive strategies [13] should be utilized in interventions to a large extent to make them appealing and to motivate attitude and behavior changes.

This paper describes the iterative design of an Internet intervention *GoodLife* (*Hyväksi*, in Finnish) for self-management of mental and physical well-being with focus on stress and recovery. The intervention was developed as a part of a larger concept which involved technologies such as mobile phone applications and measurement devices for daily self-monitoring and assessment, and a brief group intervention comprised of three two-hour face-to-face sessions held by a psychologist [14]. The psychological methods used in the face-to-face and web-based interventions were based on CBT [15] and acceptance and commitment therapy (ACT) [16]. The concept was evaluated with three user groups and improved based on the user experiences and feedback. The focus of this paper is on reporting the lessons learned and presenting the improved design of the web-based *GoodLife* intervention.

### 2 Design of Internet Interventions

Current Internet-based therapeutic interventions imitate psychological face-to-face therapies in terms of their content, methods and structure [17]. Structured face-to-face therapies, such as CBT, usually progress linearly in sessions, possibly with homework assignments performed between sessions [15]. The therapist and client form a *therapeutic alliance*, the sense of working together towards a shared goal, which is considered to be a key component in the success of therapy [15,18]. The therapist also facilitates the process by guiding the client fluently through a sequence of tasks required in the therapy, and tailors the content to the particular client’s needs. Internet-based therapeutic interventions attempt to create positive cognitive and