

# Abstract

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Kivi, M. (2015). *Internet-based Treatment of Depression in Primary Care: Effectiveness and Feasibility*. Department of Psychology, University of Gothenburg, Sweden.

Internet-delivered psychological treatments emanate from a long tradition of psychological methods and should be seen as a natural effect of the evolution within psychology, society, and technology. Psychological treatments via Internet have been shown to be effective, however the vast majority of research has been conducted outside of health care, and corresponding research in primary care settings is sparse.

Psychological illness, such as depression, is common and most often treated within primary care, where therapist availability varies. One way to increase availability and provide effective and high quality psychological treatments could be to offer Internet-delivered therapy with minimal therapist support. This raises questions, however, such as: Is Internet treatment as effective as treatment as usual (TAU) in primary care? Which patients would benefit the most? And, is Internet treatment feasible within primary care?

This thesis reports findings from four studies based on the PRIM-NET project that implemented Internet-delivered cognitive behavior therapy (ICBT) at 16 primary care centers in the Västra Götaland region in Sweden. Patients thought to be suffering from mild-to-moderate depression were assessed. 90 patients were included and randomized to either ICBT or TAU.

**Study I & II – Effectiveness:** No significant differences in the reduction in depression scores were found between the ICBT and TAU groups during treatment, after twelve weeks of treatment (post) or at follow-up three and nine months after treatment. The mean between-group effect size (Cohens' *d*) was in effect zero, while there was a large within-group effect size for both ICBT and TAU at post and at follow-ups.

**Study III – Effectiveness and latent classes:** Analysis of the ICBT patients' depression trajectories by person-oriented methods corroborated the findings of an overall effect of the ICBT treatment. A large heterogeneity among the patients was also found. Three latent classes were identified: two classes (in total 50% of the patients) responding well to the treatment, while one class (50% of the patients) effectively did not respond. No distinguishing factors were identified for the non-responding class, but initial rapid response, or lack of response, as well as level of adherence to the ICBT, could give an indication of treatment outcome.

**Study IV – Feasibility:** Qualitative methods revealed the primary care therapists' attitudes and experiences as positive; they viewed ICBT as an asset, would like to use ICBT programs in the future, and also introduce elements from ICBT into their face-to-face treatments. Some adaptations of the ICBT to better suit primary care circumstances were suggested.

**Conclusion:** Internet-delivered treatments seem to be both effective and feasible within primary care and can be introduced as a complement to other treatments.

Keywords: *Internet, ICBT, Depression, Primary care, Randomized controlled trial, Person-oriented*

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# Internet-based Treatment of Depression in Primary Care

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Avhandling för avläggande av filosofie doktorsexamen i psykologi som med vederbörligt tillstånd av samhällsvetenskapliga fakulteten vid Göteborgs universitet kommer att offentligens förvaras fredagen den 4 december 2015, kl 10:00 i sal F1, Psykologiska institutionen, Haraldsgatan 1, Göteborg

Fakultetsopponent: Professor Gerhard Andersson  
Institutionen för beteendevetenskap och lärande/Avdelningen för psykologi, Linköpings Universitet och Institutionen för klinisk neurovetenskap, Karolinska Institutet

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This thesis is based on the following scientific papers, referred to by Roman numerals:

- I. Kivi, M., Eriksson, M. C. M., Hange, D., Petersson, E-L., Vernmark, K., Johansson, B., & Björkelund, C. (2014). Internet-Based Therapy for Mild to Moderate Depression in Swedish Primary Care: Short Term Results from the PRIM-NET Randomized Controlled Trial. *Cogn Behav Ther*, 43(4), 289-298. doi: 10.1080/16506073.2014. 921834.
- II. Eriksson, M. C. M., Kivi, M., Hange, D., Petersson, E-L., Ariai, N., Häggblad, P., Ågren, H., Spak, F., Lindblad, U., Johansson, B., & Björkelund, C. (2015). Long-term effects of Internet Cognitive Behavioural Therapy for mild/moderate depression in primary care – the PRIM-NET randomised controlled trial. (Submitted manuscript).
- III. Kivi, M., Eriksson, M. C. M., Björkelund, C., Johansson, B., & Lindwall, M. (2015). Internet-delivered Cognitive Behavioral Therapy for Depression in Primary Care: A person-oriented analysis of depression trajectories. (Submitted manuscript).
- IV. Kivi, M., Eriksson, M. C. M., Hange, D., Petersson, E-L., Björkelund, C., & Johansson, B. Experiences and attitudes of Primary Care Therapists' in the Implementation and Use of Internet-Based Treatment in Swedish Primary Care Settings. (2015). *Internet Interventions*, 2(3), 248-256. doi: 10.1016/j.invent.2015.06.001.



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