



# Cost-effectiveness of internet-based vs. group treatment in subthreshold depression

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## Introduction

Subthreshold depression: symptoms of depression, but not enough to meet the DSM-IV criteria for major depression

## Introduction

- Prevalence: 8-16% in people > 50 years of age
- Clinically relevant
- Risk factor for developing a major depressive episode

## Introduction

In earlier papers, we reported on the effectiveness of internet-based treatment compared to group treatment for subthreshold depression

## Introduction

Internet-based treatment was found to be at least equally effective compared to group treatment.

Beek et al. Psychological Medicine 2007; 37, 1797-1806.

Beek et al. Psychological Medicine 2008; 38, 635-640.



## Objective of the study

To estimate the cost-effectiveness of an internet-based intervention for subthreshold depression, by comparing it to an evidence-based group treatment.

## Methods

200 participants

mean age = 55 years, SD = 4.6

presenting with subthreshold  
depression (depressive symptoms  
not meeting the DSM-IV criteria of  
depression)

## Procedure

- Screening for depression
- Face-to-face interview with CIDI
- Randomization
- Baseline assessment
- Intervention
- (Post-treatment assessment)
- One-year follow-up



## Interventions

- Group cognitive behaviour therapy
- 10 group sessions with homework
- Evidence-based treatment
- Based on Lewinsohn's Coping With Depression course

# Interventions

## Color Your Life

Treatment at home

Self help, no support from therapist

Based on Dutch adaptation of  
Lewinsohn's Coping With Depression  
course

## Methods

Depressive symptoms were measured with the BDI.

Treatment response:

clinically significant change according to the definition of Jacobson & Truax (1991).

## Methods

secondary cost-effectiveness analysis  
based on:

- direct medical costs,
- intervention costs,
- patients' out-of-pocket costs.

Not included: costs stemming from

## Results

Successful treatment response occurred in 63% of the participants who received the internet-based intervention as compared to 53% in group intervention.



## Results

**per participant intervention costs**

Internet-based treatment: € 323

Group treatment: € 1830

This includes participants' time, costs

for travel, group leaders salaries,

hosting for the website, etc.

## Results

Health service type	Direct medical costs	Direct non-medical costs
General practitioner	€ 21.36	€ 11.74
Social worker	€ 45.38	€ 30.14
Physiotherapist	€ 24.06	€ 20.52
Antroposophic GP	€ 21.36	€ 11.74
Psychic/medium	€ 42.46	€ 21.05
Alternative therapist	€ 42.48	€ 21.05
Psychologist	€ 131.14	€ 21.05
Medical specialist	€ 103.64	€ 21.36

## Results

Pre- to post-treatment savings in costs by condition: means (standard deviations)

	Internet CBT	Group CBT	Difference
Antidepressants hypnotics	€ 11.33 (€ 43)	€ 4.08 (€ 50)	€ 7.25
Other medical costs	€ 294.18 (€ 572)	€ 312.39 (€ 617)	- € 18.21
Direct non- medical costs	€ 26.93 (€ 47)	€ 22.92 (€ 46)	€ 4.01

## Results

Incremental cost-effectiveness ratio

$$(C1 - C0) / (E1 - E0)$$

$$(655 - 2170) / (63 - 53) = \text{€ } 151.50$$

## Results

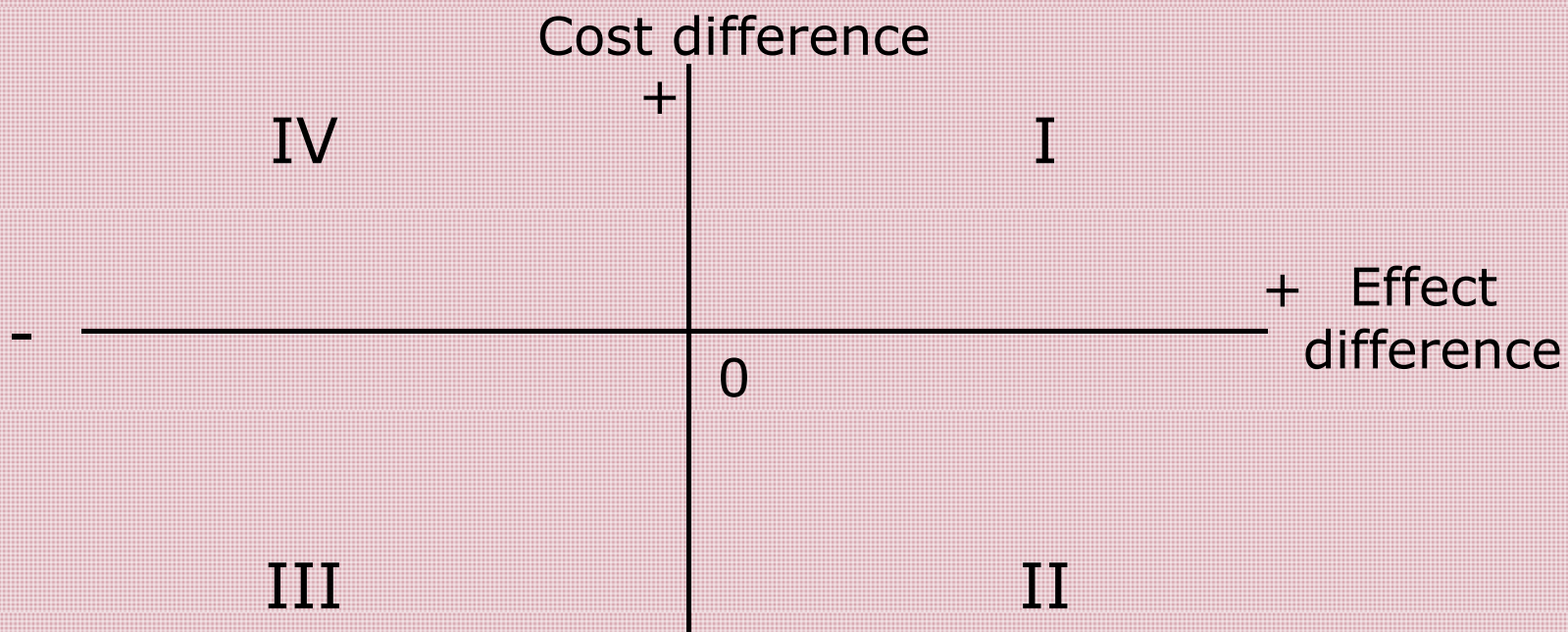
Incremental cost-effectiveness ratio

For each case of clinically significant change that is reached by offering internet based treatment instead of group treatment, a saving of €151.50 is made

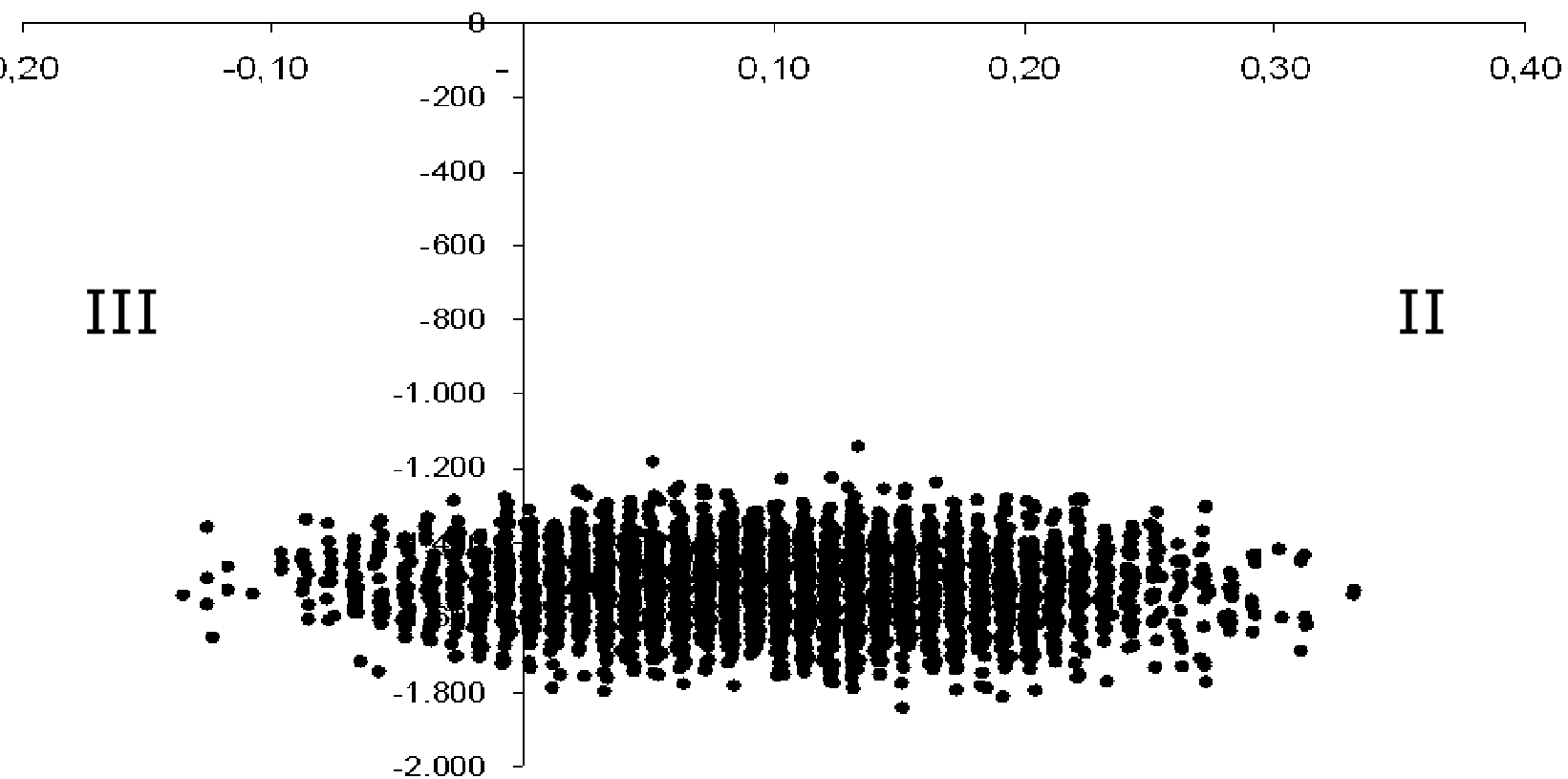


# Results

## Cost-effectiveness plane



# Results



## Results

### Cost-effectiveness plane

94% of the dots are in the lower right-hand quadrant

Internet-based treatment generates better health effects against lower costs

6% probability that internet-based is

## Discussion

Clinically significant change:

63% vs. 53%

Costs of internet-based treatment  
compared to group treatment:

€ 323 vs. € 1830

Incremental cost-effectiveness ratio

= - € 151.50

## Limitations

We did not incorporate costs of production losses

We were faced with attrition and missing data

Time span = 1 year



## Conclusions

Internet-based treatment combines gains in health with cost savings compared to group treatment.

# Thank you for listening!

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