# Managing mental health and its consequences on medical care in general

Value Based Integrative Behavioral Health

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Depression is a global problem - the challenges of adequate care vary regionally

- 350 million people are suffering from depression worldwide[1]

- Lifetime prevalence: 10%-15%[2]

- Depressions are the third leading contributor to global disease burden[3]

- By 2030 depressions will become the most widespread disease[2]

- Suicide is one of the leading causes of death globally for all ages[3]

- Global treatment gap for depression 56.3%[4]

Access

Quality   **Cost**

care parameters
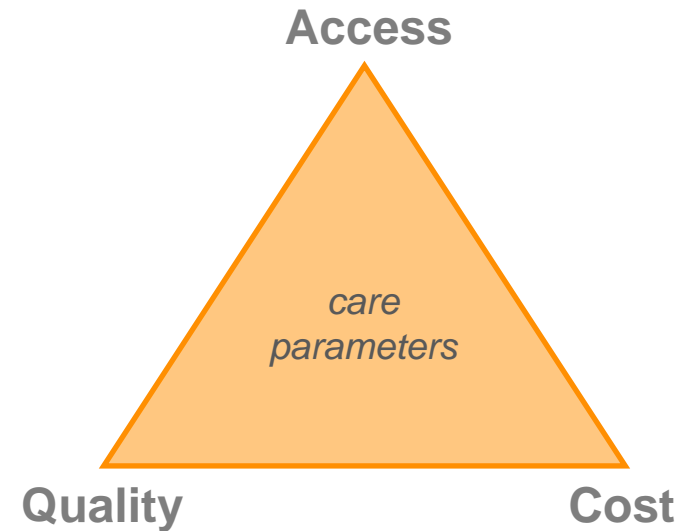
[1] WHO (2010)
[2] Lépine & Briley (2011)
[3] Tomlinson & Lund (2012)
[4] Kohn et al. (2004)

Treatment options of depression vary in access, quality and costs

	Drug	Psychotherapy	Online self-help
Access	✓✓✓	✓ - ✓✓✓	✓✓✓
Quality (Cohens' d)[1]	d = 0,32[2]	d = 0,80[3]	d = 0,28[4]
Cost	annual therapy cost sertraline (generic): 84 USD[5]	8 visits at 95 USD each on average[6]	free/ funded

Objective: Combine the strengths of psychotherapy and online self-help

→ **Online-Psychotherapy**
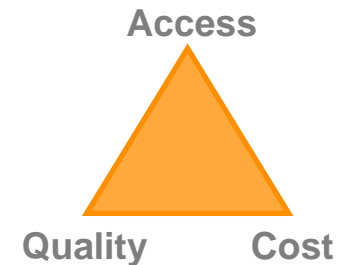
[1] Cohen's d is a statistical effect size. Interpretation according to Cohen (1988): 0.2=small effect, 0.5=medium effect, 0.8=large effect
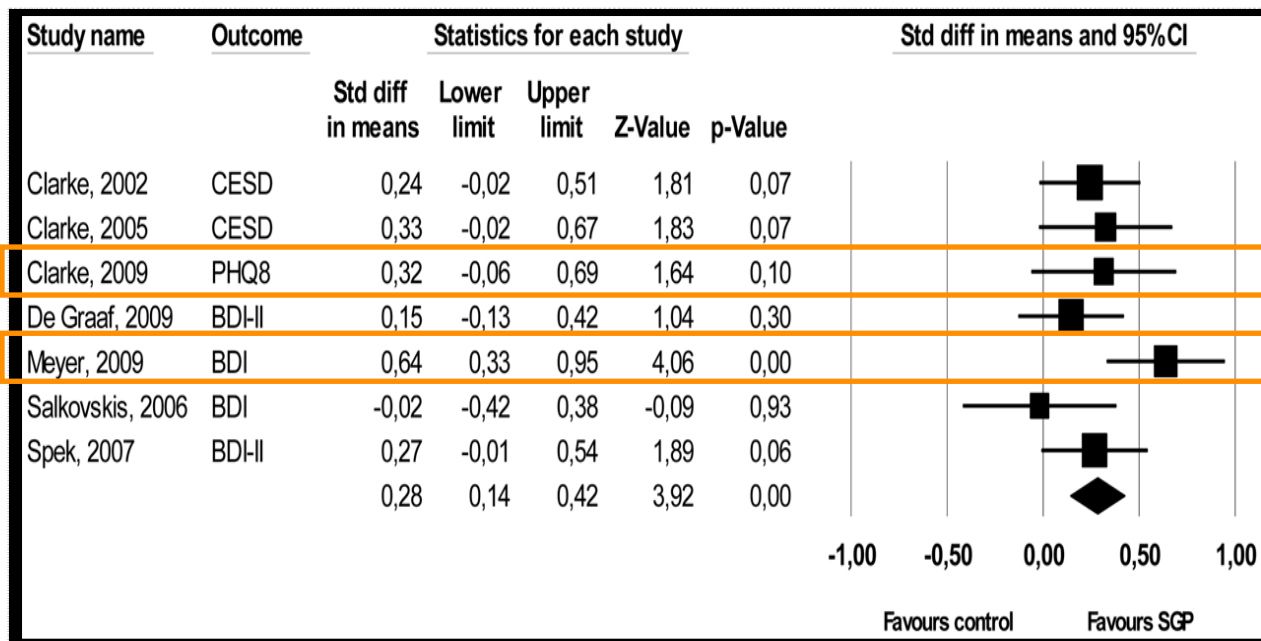[2] Turner et al. (2008)
[3] Kehle et al. (2001)
[4] Cuijpers et al. (2011), overall mean effect size
[5] DDD for treatment of depression: sertraline 50 mg (Zoloft), 7 USD for 30 tablets (goodrx.com)
[6] Olfson & Marcus (2010)

Meta-analysis of online self-help and online psychotherapy[1]

- All programs without any contact between the participants and a therapist or coach
- Content based on cognitive behavioral techniques
- Effect sizes (Cohen's d)[2] range
  - from d = -0,02 (no effect)
  - to d = 0,64 (medium to large effect size)

Study name	Outcome	Std diff in means	Lower limit	Upper limit	Z-Value	p-Value
Clarke, 2002	CESD	0,24	-0,02	0,51	1,81	0,07
Clarke, 2005	CESD	0,33	-0,02	0,67	1,83	0,07
Clarke, 2009	PHQ8	0,32	-0,06	0,69	1,64	0,10
De Graaf, 2009	BDI-II	0,15	-0,13	0,42	1,04	0,30
Meyer, 2009	BDI	0,64	0,33	0,95	4,06	0,00
Salkovskis, 2006	BDI	-0,02	-0,42	0,38	-0,09	0,93
Spek, 2007	BDI-II	0,27	-0,01	0,54	1,89	0,06
		0,28	0,14	0,42	3,92	0,00

Std diff in means and 95%CI — scale: -1,00 -0,50 0,00 0,50 1,00
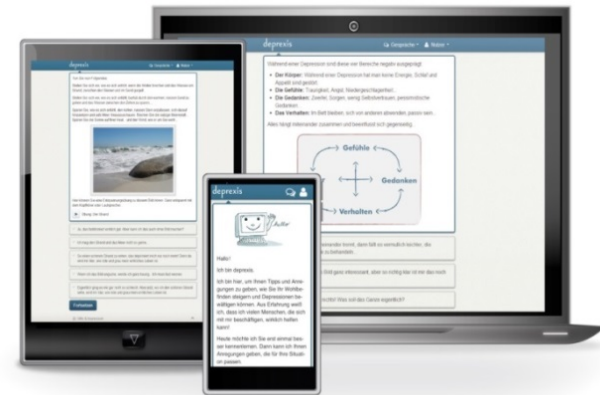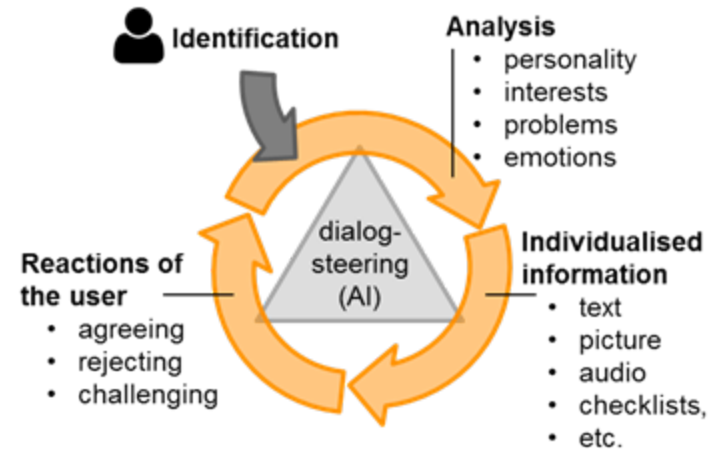
Favours control — Favours SGP

[1] Cuijpers et al. (2011)
[2] Cohen's d is a statistical effect size. Interpretation according to Cohen (1988): 0.2=small effect, 0.5=medium effect, 0.8=large effect

Example 1: Effects of the online self-help program ODIN[1] (Clarke 2009)

- Small effect size[2]: d = 0,32[3]

- Incorporates CBT with focus on cognitive restructuring
  - Most recent version revised for young adults
  - Style: self-help book

- No individualization:
  - "one size fits all" content for all users

- Limited availability
  - usage only on big screens, not applicable on smartphones

[1] "Overcoming Depression on the InterNet"
[2] Cohen's d is a statistical effect size. Interpretation according to Cohen (1988): 0.2=small effect, 0.5=medium effect, 0.8=large effect
[3] Clarke et al. (2009)

Example 2: Effects of the online psychotherapy program deprexis® (Meyer 2009)

- **Medium to large effect size[1]: $d = 0{,}64$[2]**
  - proven effectiveness in 3 independent RCTs[2-4]
  - increased effect size of $d = 1{,}14$ with secured diagnosis and therapeutic guidance/support[3]

- **Incorporates classic CBT plus contemporary evidence-based research trends/"3rd wave"**

- **Individualization and personal relevance:**
  - Provision of new information and exercises based on continuous identification of the patient's needs and emotional situation, based on artificial intelligence (AI)
  - Increased long-term learning-effect due to active engagement with the content and perceived personal relevance

- **"All screen" availability**
  - responsive website technology
  - 24/7 usage on any connected device (smartphone, tablet, PC)

[1] Cohen's d is a statistical effect size. Interpretation according to Cohen (1988): 0.2=small effect, 0.5=medium effect, 0.8=large effect
[2]Meyer et al.(2009)
[3]Berger et al.(2011)
[4]Moritz et al. (2012)

Quotes from online psychotherapy patients

"Dear team, I am very excited about the program. After having completed almost 3 psychotherapies I really benefit from the suggestions of your program, exercises and the general approach to the disease. I am very curious to continue. Regards"

B.G. via email

"The program always sets the right tone."

Stern magazine Sept. 2013

"Good afternoon!

You cannot imagine how much this has helped me – many, many thanks for this great program! [...] This may sound quite exaggerated, but I don't know how much further I would have dropped without it. Like I mentioned, my therapist was on vacation. That's why this really great and human program was my rescue!"

C.B. via email

"Dear Sir or Madam,

Thanks to the program I am able to continue to live my normal life and to work - and I am so happy about this.

I also talked with my doctor who didn't know the program and he was very exited.

Thank you very much for this help!!!! (without you I would not be working and taking antidepressants)"

K.M. via email

"Happy cows come from California!"

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