



Internet-based interventions: current trends in research and practice



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EFPA Project Group e-Health : From theory to practice - how can you make use of the potential of technology for psychology?
22 November 2022, Vilnius University, Lithuania

Terminology

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Consensus statement on the problem of terminology in psychological interventions using the internet or digital components



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Terminology

Table 1

Examples of title terms used to delineate internet-delivered psychological interventions, including the number of occurrences in titles in PubMed in November 2019.

Term used	Titles in PubMed	Publication title	Citation
Avatar-assisted therapy	3	Avatar-assisted therapy: a proof-of-concept pilot study of a novel technology-based intervention to treat substance use disorders.	Gordon et al. (2017)
Chat treatment	1	Effectiveness of a web-based solution-focused brief chat treatment for depressed adolescents and young adults: randomized controlled trial.	Kramer et al. (2014)
Computer-assisted therapy	15	Computer-assisted therapy for medication-resistant auditory hallucinations: proof-of-concept study.	Leff et al. (2013)
Computer intervention	10	Development and preliminary pilot evaluation of a brief tablet computer intervention to motivate tobacco quitline use among smokers in substance use treatment.	Brown et al. (2017)
Computerized therapy	6	Attitudes towards the use of computerized Cognitive Behavior Therapy (cCBT) with children and adolescents: a survey among Swedish mental health professionals.	Vigerland et al. (2014)
Computer-mediated psychotherapy	1	Psychotherapy in cyberspace: A 5-dimensional model of online and computer-mediated psychotherapy.	Suler (2000)
Computer therapy	11	My care manager, my computer therapy and me: The relationship triangle in computerized cognitive behavioral therapy.	Cavanagh et al. (2018)
Cybertherapy	17	Cybertherapy meets Facebook, blogger, and second life: an Italian experience.	Graffeo and La Barbera (2009)
Digital health	546	Accelerating digital mental health research from early design and creation to successful implementation and sustainment	Mohr et al. (2017)
Digital service	3	Evaluation of the practitioner online referral and treatment service (PORTS): the first 18 months of a state-wide digital service for adults with anxiety, depression, or substance use problems	Titov et al. (2019)

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Examples of title terms used to delineate internet-deliver

Term used	Titles in PubMed				
Avatar-assisted therapy	3	Distance counseling	1	Minimal-contact intervention(s)	7
Chat treatment	1	Distance therapy	1	Online clinical work	1
Computer-assisted therapy	15	E-aid	1	Online counseling	17
Computer intervention	10	E-counseling	7	Online intervention	129
Computerized therapy	6	E-health program	2	Online program	60
Computer-mediated psychotherapy	1	E-mental health	87	Online psychotherapy	3
Computer therapy	11	Etherapy	4	Online therapy	13
Cybertherapy	17	E-therapy	27	Online treatment	29
Digital health	546	E-mail therapy	3	Self-help through the internet	2
Digital service	3	Guided self-help	187	Telecounseling	2
		Internet-administered treatment	4	Telepsychiatry	349
		Internet-based treatment	50	Telepsychology	18
		Internet-delivered therapy	175	Teletherapy	785
		Internet intervention	81	Treatment administered through a smartphone application	2
		Internet-supported therapy	2	Virtual reality therapy	50
		Internet therapy	11		
		Internet treatment	25		
		Interapy	4		
		Medicine 2.0	20	Web-based intervention	250

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Classification

Clinical services: clinician-client contract		Digital interventions: self-help	
Type 1	Type 2	Type 3	Type 4
Face-to-face (e.g., traditional therapy)	Face-to-face augmented with technology (e.g., teletherapy, therapy using online tools, apps)	Guided interventions (e.g., using coaches to increase adherence with online intervention)	Totally automated interventions (with no human guidance, like a self-help book)
Consumable	Consumable	Consumable	Non-consumable

Muñoz, R. F., Chavira, D. A., Himle, J. A., Koerner, K., Muroff, J., Reynolds, J., ... & Schueller, S. M. (2018). Digital apothecaries: a vision for making health care interventions accessible worldwide. *Mhealth*, 4.

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Berryhill, M. B., Culmer, N., Williams, N., Halli-Tierney, A., Betancourt, A., Roberts, H., & King, M. (2019). Videoconferencing psychotherapy and depression: a systematic review. *Telemedicine and e-Health*, 25(6), 435-446.

Muñoz, R. F., Chavira, D. A., Himle, J. A., Koerner, K., Muroff, J., Reynolds, J., ... & Schueller, S. M. (2018). Digital apothecaries: a vision for making health care interventions accessible worldwide. *Mhealth*, 4.

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Conditions and therapies

7 studies for internet-delivered psychodynamic therapy (Lindegaard et al., 2020)

Lindegaard, T., Berg, M., & Andersson, G. (2020). Efficacy of internet-delivered psychodynamic therapy: Systematic review and meta-analysis. *Psychodynamic Psychiatry*, 48(4), 437-454.

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Apps

Bakker et al., 2016

JMIR MENTAL HEALTH Bakker et al

Table 1. Currently available iOS apps compared across recommended features.

App	Recommended feature ^a															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AnxietyCoach	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗	✓	✗	✓	✗	✗
Behavioral Experiments	✓	✓	✗	✗	✓	✗	✗	✓	✗	✗	✗	✗	✗	✓	✗	✗
Breathe	✗	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✓	✓	✓
DBT Diary Card and Skills Coach	✗	✗	✗	✗	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✗	✗
Depression Prevention	✗	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
Happify	✗	✓	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓	✓	✓	✗	✗
HealthyHabits	✗	✓	✓	✗	✗	✓	✗	✗	✗	✗	✓	✓	✓	✗	✗	✗
HealthyMinds	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HIAF	✗	✗	✓	✗	✓	✗	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓
iCoach CBT	✓	✓	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
iCounselor ^b	✓	✗	✗	✗	✓	✓	✗	✓	✓	✓	✓	✗	✗	✗	✓	✓
iMoodJournal	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
In Hand	✗	✓	✓	✗	✓	✗	✗	✗	✗	✗	✗	✗	✗	✓	✓	✓
MindShift	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗
MoodKit	✓	✓	✗	✗	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Moodlytics	✗	✗	✗	✗	✓	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Moody Me	✗	✗	✓	✗	✓	✗	✓	✗	✗	✗	✗	✓	✓	✓	✓	✓
Pacifica	✓	✗	✓	✗	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pocket CBT	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
SAM	✓	✗	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Smiling Mind	✓	✓	✓	✓	✓	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓
Stress & Anxiety Companion	✓	✗	✗	✗	✓	✓	✓	✗	✗	✗	✗	✗	✗	✓	✓	✓
SuperBetter	✗	✓	✓	✓	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓
ThinkHappy	✗	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
What's Up?	✓	✓	✓	✗	✗	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓
WorkOut	✓	✓	✓	✗	✓	✓	✗	✗	✓	✓	✓	✓	✓	✓	✓	✓
WorryTime	✓	✗	✓	✗	✗	✗	✗	✓	✗	✗	✗	✗	✓	✓	✓	✓

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Table 1 Conditions for which guided Internet-delivered psychological treatment has been tested in research (randomized controlled trials)

RCTs

Psychiatric conditions	Somatic conditions/ health problems	Other
Depression (including postpartum depression)	Headache	Couples therapy
Bipolar disorder	Tinnitus	Parent training
Panic disorder	Diabetes	Stress problems
Social phobia	Insomnia	Perfectionism
Specific phobia	Childhood encopresis	Burnout
Mixed anxiety/depression	Chronic pain	Procrastination
Health anxiety	Cancer	Bereavement
Obsessive-compulsive disorder	Irritable bowel syndrome	Infertility distress
Generalized anxiety disorder	Erectile dysfunction	Body dissatisfaction
Posttraumatic stress disorder	Hearing loss	Grief
Pathological gambling	Chronic fatigue	
Bulimia and eating disorders	Multiple sclerosis	
Body dysmorphic disorder	Obesity	
Drug addictions	Smoking	
Attention-deficit/hyperactivity disorder		

Andersson, G. (2016). Internet-delivered psychological treatments. *Annual review of clinical psychology*, 12, 157-179.

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Effectiveness vs face-to-face

- Social anxiety disorder
- Panic disorder
- Depressive symptoms
- Body dissatisfaction
- Insomnia
- Tinnitus
- Male sexual dysfunction
- Spider phobia
- Snake phobia
- Fibromyalgia



Cognitive Behaviour Therapy



ISSN: 1650-6073 (Print) 1651-2316 (Online) Journal homepage: <http://www.tandfonline.com/loi/sbeh20>

Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: an updated systematic review and meta-analysis

Per Carlbring, Gerhard Andersson, Pim Cuijpers, Heleen Riper & Erik Hedman-Lagerlöf

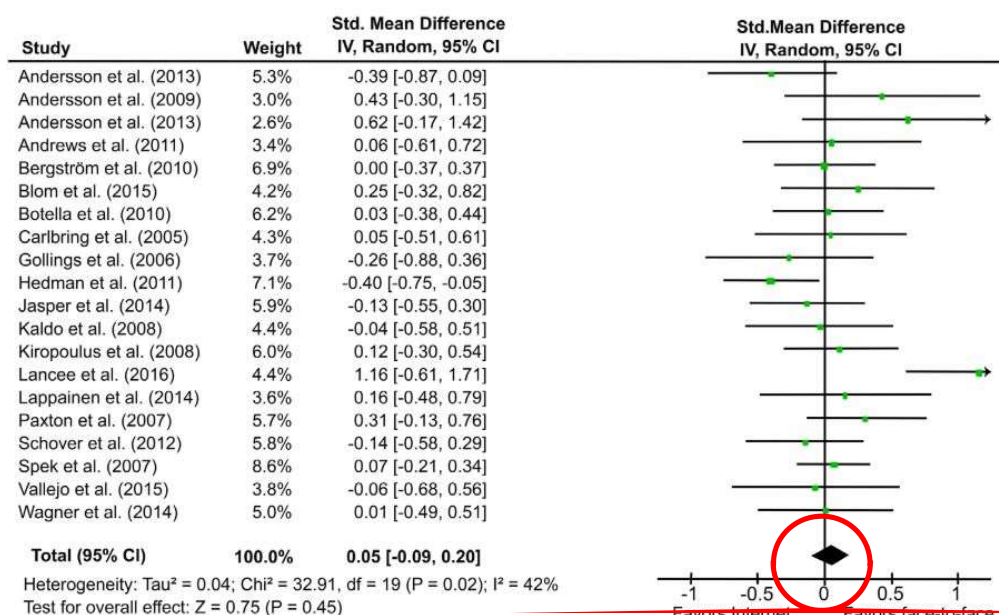
To cite this article: Per Carlbring, Gerhard Andersson, Pim Cuijpers, Heleen Riper & Erik Hedman-Lagerlöf (2018) Internet-based vs. face-to-face cognitive behavior therapy for psychiatric and somatic disorders: an updated systematic review and meta-analysis, *Cognitive Behaviour Therapy*, 47:1, 1-18, DOI: [10.1080/16506073.2017.1401115](https://doi.org/10.1080/16506073.2017.1401115)

To link to this article: <https://doi.org/10.1080/16506073.2017.1401115>

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Example from Lithuania



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Example from Lithuania (2)



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Research at Vilnius University

Department of Clinical Psychology and Center for Psychotraumatology

- iPSYDE for depressed elderly
- TinnitusLT for tinnitus distress
- PIPP for PTSD
- BADI for adjustment disorder
- Forest for nurses
- Forest for medics
- Slaugau artimą for informal caregivers
- StillMe for students after psychotrauma

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Attitudes

Clients tend to be more positive than clinicians, even if there are exceptions (Wangberg et al., 2007).

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Negative effects

Large patient-level meta-analysis on deterioration we found that deterioration rates among the treated participant were 5.8% and in the controls 17.4% (Rozenal et al., 2017).

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Implementation

Standalone
Stepcare

Australia
UK
USA
Sweden
Germany

The screenshot shows the 'beating the blues' website. The logo is 'beating the blues' with 'negative behavioural therapy' underneath. The navigation menu includes 'Home', 'What We Offer', 'Who We Can Help', 'About our Therapy', and 'Contact Us'. The main content area features a 'CBT Online Course' advertisement with the text: 'Feeling stressed, anxious or depressed? Check your mood and anxiety with our free online test' and a 'CLICK HERE' button. Below the advertisement are three buttons: 'For Service Providers' (with a doctor icon), 'For Yourself' (with a house icon), and 'For Employers' (with a briefcase icon). A woman is shown in the background of the advertisement, looking thoughtful.

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Implementation

Australia
UK
USA
Sweden
Germany

MindSpot

1800 61 44 34 I need urgent help Login

Get Informed Assessment Treatment Courses About For Health Professionals

A digital mental health clinic for all Australians.

Trusted by over 150,000 Australians, MindSpot provides free, anonymous assessment and treatment for adults experiencing stress, anxiety, depression, OCD, PTSD, and chronic pain. Start with a 20-minute assessment and get connected with help.

Start your online assessment Learn more

Always confidential. Free for everybody. Evidence-based.

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Effectiveness in regular clinical settings

Verhaltenstherapie

Praxis | Forschung | Perspektiven

Review Article · Übersichtsarbeit

Verhaltenstherapie 2013;23:140–148
DOI: 10.1159/000354779

Online publiziert: 22. August 2013

Effectiveness of Guided Internet-Based Cognitive Behavior Therapy in Regular Clinical Settings

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^a Department of Behavioral Science and Learning, Swedish Institute for Disability Research, Linköping University,

^b Department of Clinical Neuroscience, Division of Psychiatry,

^c Department of Clinical Neuroscience, Osher Center for Integrative Medicine and Division of Psychology, Karolinska Institutet, Stockholm, Sweden

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Effectiveness in regular clinical settings

Table 2. Effectiveness studies of ICBT delivered to patients in clinical routine practice

Reference	Country	Disorder	N	Outcome	Effect sizes ^a (pre/post d)
Bergström et al. [2009]	Sweden	panic disorder	20	PDSS	2.5
Hedman et al. [2013]	Sweden	panic disorder	570	PDSS-SR	a) 1.07
Ruwaard et al. [2012]	the Netherlands	a) panic disorder	a) 139	a) PDSS-SR	a) 1.36
		b) posttraumatic stress	b) 478	b) IES-intrusion and avoidance	b) 1.36
		c) depression	c) 413	c) BDI	c) 2.01
		d) burnout	d) 470	d) DASS-stress	d) 1.49
Aydos et al. [2009]	Australia	social anxiety disorder	17	a) SIAS b) SPS	a) 1.51 b) 0.60
Newby et al. [2013]	Australia	mixed anxiety and depression	136	a) GAD-7 b) PHQ-9	a) 1.15 b) 0.89
Mewton et al. [2012]	Australia	general anxiety disorder	588	GAD-7	0.86
Williams and Andrews [2013]	Australia	depression	359	PHQ-9	0.98
Kaldo et al. [2004]	Sweden	tinnitus	77	TRQ	0.56
Kaldo et al. [2013]	Sweden	tinnitus	293	TRQ	0.58

ICBT = internet-based cognitive behavior therapy; PDSS = Panic Disorder Severity Scale; SIAS = Social Interaction Anxiety Scale; GAD-7 = Generalized Anxiety Disorder Scale, 7-item version; PHQ-9 = Patient Health Questionnaire 9; PDSS-SR = Panic Disorder Severity Scale Self-Report; IES = Impact of Event Scale; BDI = Beck Depression Inventory; DASS = Depression Anxiety Stress Scales; TRQ = Tinnitus Reaction Questionnaire.

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Barriers to implementation



Improving Implementation of eMental Health for Mood Disorders in Routine Practice: Systematic Review of Barriers and Facilitating Factors

Christiaan Vis ^{1,2} ; Mayke Mol ^{2,3} ; Annet Kleiboer ^{1,2} ; Leah Bührmann ^{1,2} ; Tracy Finch ⁴ ; Jan Smit ^{2,3} ; Heleen Riper ^{1,2,3,5}

- (1) the acceptance of eMH concerning expectations and preferences of patients and professionals about receiving and providing eMH in routine care
- (2) the appropriateness of eMH in addressing patients' mental health disorders
- (3) the availability, reliability, and interoperability with other existing technologies such as the electronic health records are important factors for mental health care professionals to remain engaged in providing eMH to their patients in routine care.

Roundup

- Better effectiveness and processes.
- EFPA survey on online psychological consulting could have hints on how to promote internet-delivered interventions.



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