

Unlocking the power of technology
to improve Europe's mental health.



PROJECT
AREA



Amount of ERDF received from Interreg North-West Europe:

€3.22 million

Total project budget:
€5.36 million

www.nweurope.eu/emen

eMen start conference

February 6th
Mechelen
Belgium

9u00 – 9u30	Welcome with coffee
9u30 – 9u45	Welcome (Peter De Graef)
9u45 – 10u00	Opening (Herman Van Rompuy)
10u00 – 10u40	E-mental health and the social domain (Heleen Riper)
10u40 – 11u00	Unlocking the power of technology to improve Europe’s mental health (Oyono Vlijter)
11u – 11u20	E-mental health policy in the Netherlands (Dutch) (Kamal De Bruijn)
11u20 – 11u50	Break
11u50 – 12u30	Showcase of technological applications in mental healthcare (Tom Van Daele & Bert Bonroy)
12u30 – 13u50	Lunch
13u50 – 14u30	Best practices 1
14u30 – 15u10	Paneldiscussion
15u10 – 15u50	Break
15u50 – 16u30	Best practices 2
16u30 – 17u00	Policy (Dutch) (Minister Jo Vandeurzen)
17u00 – 18u00	Drinks



E-Health Excellence

eMental-Health & the Social Domain

Prof. dr. Heleen Riper

Vrije Universiteit Amsterdam, NL

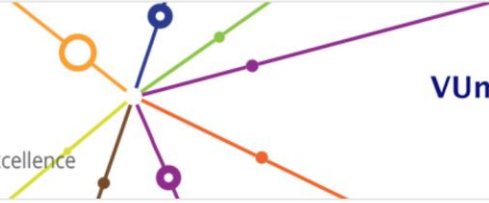
eMen Conference/ INTERREG

Mechelen, 5 February 2017





EMGO⁺ E-Health Excellence



Onderzoek

Projecten

Innovatielab

Over ons

Partners

Contact

Blog



Kansen voor West en Interreg van start!

6 juni, 2016 by [Marleen Swenne](#)

Triple-E & ARQ lanceren op 6 juni 2016 de start van twee geïntegreerde samenwerkingsprojecten: Kansen voor West en Interreg. Het doel is ontwikkelen, onderzoeken en implementeren van eHealth-projecten. [Read more](#) →



Smart Mental Health: Accessible, Acceptable & Cost-Effective.

Onder die titel publiceerde Heleen Riper 25 mei 2016 in het Spaanse SmartHealth webmagazine een gast-column. Ze heeft goed nieuws maar ook minder goed nieuws. Lees [hier](#) de column (Engelstalig) smartandhealth.com →

Blog



eHealth in Indonesia

14 juli, 2016 Door Dilifa Juniar



eHealth maakt het contact laagdrempelig

6 juni, 2016 Door Mayke Mol



Kansen voor West en Interreg: De bedenkers aan het woord.

6 juni, 2016 Door Marleen Swenne

[Meer blog items](#)

Triple-E is een eHealth onderzoeksnetwerk van VUmc, VU en GGZ inGeest. Het doel van Triple-E is het bevorderen van de (kosten) effectiviteit van de (geestelijke) gezondheidszorg met behulp van innovatieve digitale technologieën. [lees meer >>](#)



Vogelbuurt

This is an aerial photograph of the Amsterdam harbor area. The image shows a complex network of canals and waterways. In the foreground, the large, dark-roofed train station is visible. To the left, the residential area of Vogelbuurt is shown. In the center, Java-eiland is a small island with a large cruise ship docked. To the right, Kattenburg is a residential area with many houses. The background shows more of the harbor and the city skyline.

Java-
eiland

Kattenburg

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This presentation.....

- **Knowledge cycle eMental-Health**
- **State of the Art: Evidence base eMental-health for depression, anxiety, PTSS & substance use disorders**
- **Beyond State of the Art: P, I, E**
- **Discussion**

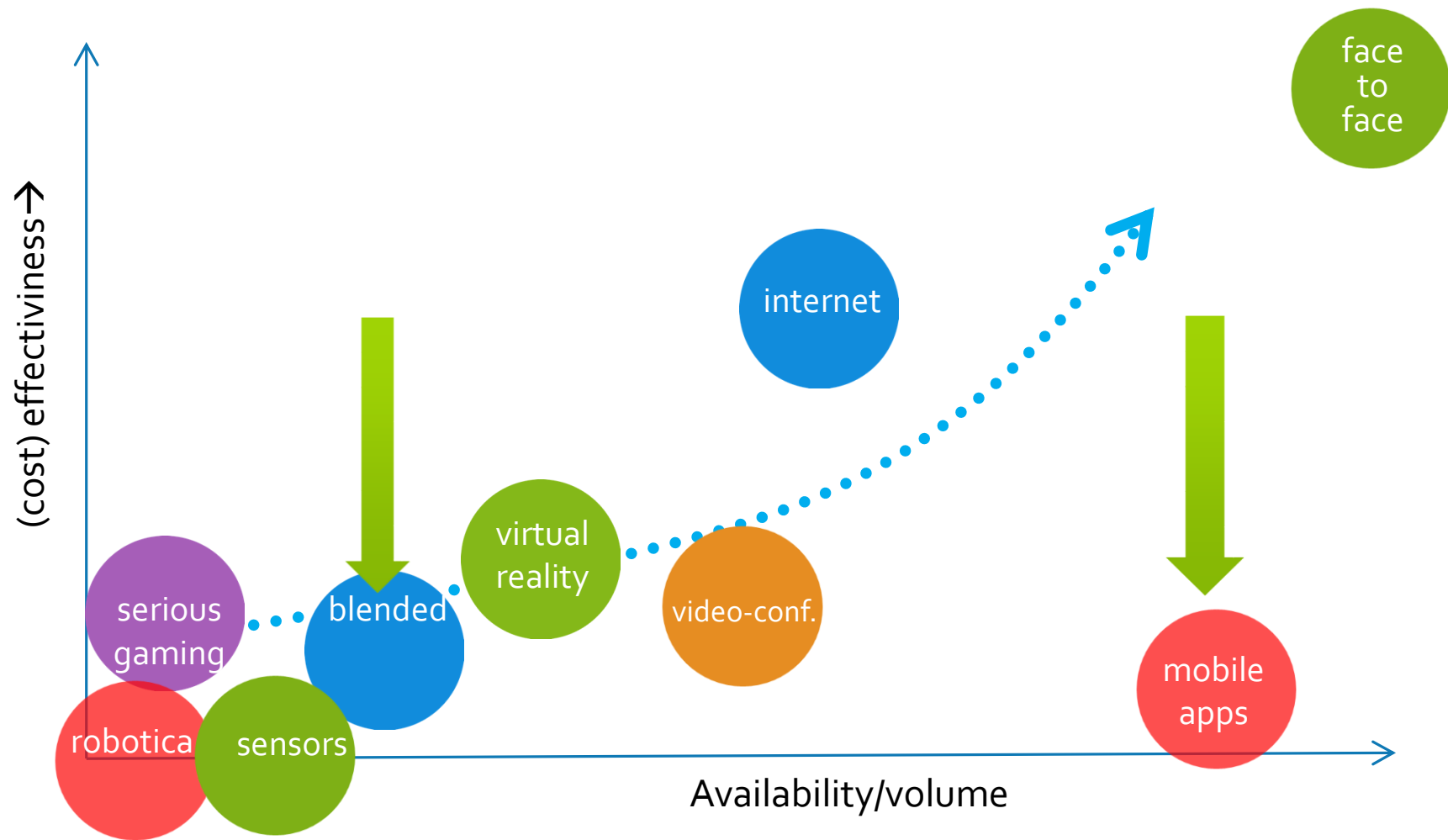


Ample room for improvement

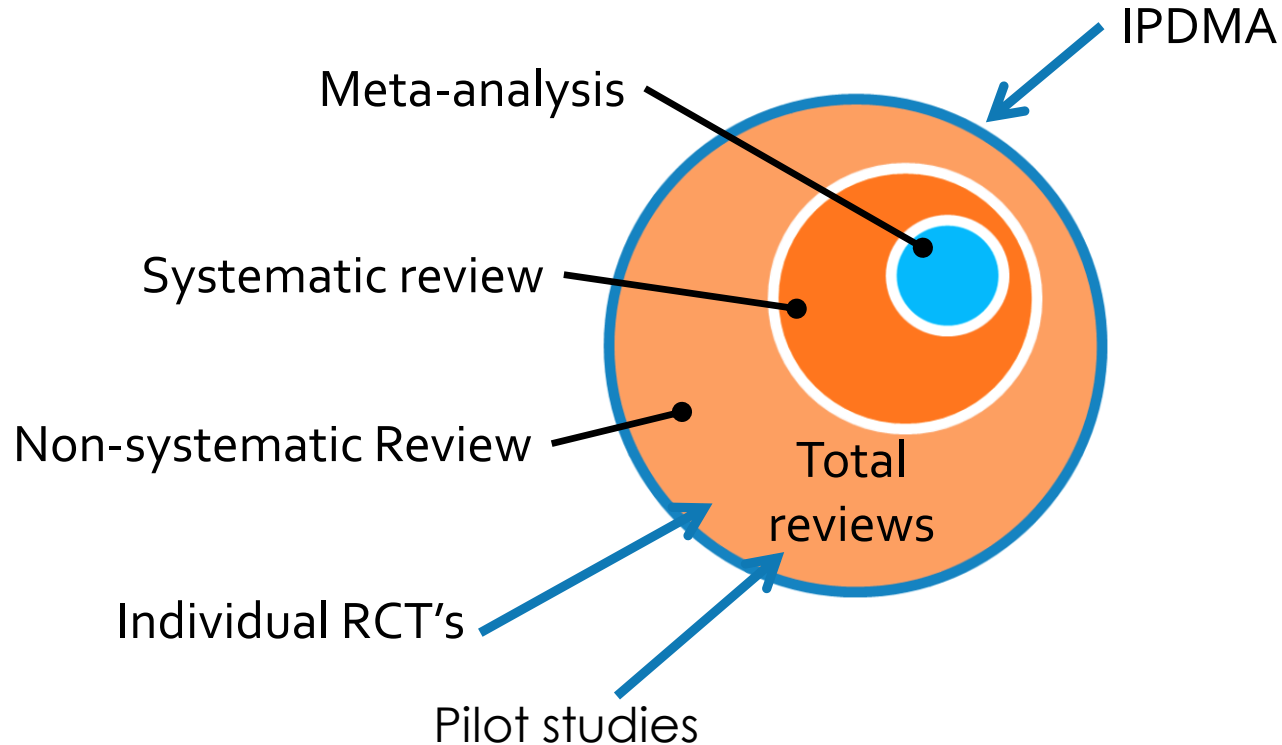
Reach
Access
Effectiveness
Stigma
Prevention, Prevalence
Treatment
Care

E-MENTAL- HEALTH RESEARCH





Levels of Evidence



Meta-analyses iCBT/Transdiagnostic/Tailored depression & anxiety & alcohol & cannabis (18+)

Study/authros	Disorder	Effect size
iCBT disorder specific Comparator: WL, AO, Psy Ed		
Spek et al. 2007	depression unguided	small
Andersson et al. 2009	depression guided	small to moderate
Richards & Richardson 2012	anxiety unguided	small - moderate
Andrews 2010 (major)	anxiety guided	moderate - large
Olthuis 2016		
iCBT Transdiagnostic/Tailored anxiety depression (n = 19) Ruxandra Păsărelua 2016	anxiety depression comorbid guided/unguided!! iCBT v disorder specific	medium - large moderate no difference anxiety no difference iCBT +++ for depression/QO:
Mobile Apps Donker et al ,	depression anxiety	promising
iCBT/ FTF Cuijpers 2010 (iCBT vs fCBT) Andersson, Cuijpers, Riper 2014 (iCBT vs fCBT)	depr. & anxiety depression/ ea	equal
Cost-effectiveness Donker et al 2015 Lokkerbol et al. 2015	Depression, anxiety, alcohol	Promising Comparative effectiveness studies needed

Studies & Meta-analyses

PTSD adults & youth

Study	Comparison	Effect size
Sijbrandij et al. 2016 (n = 14)	iPTSD v WL/TAU PTSD symptoms	moderate: $g = 0.71$, 95% CI 0.49–0.93, $p < .001$
	iPTSD v active interventions PTSD symptoms	small: $g = 0.28$, 95% CI 0.00–0.56, $p = .05$
Sloan et al 2011 (n = 13)	telehealth PTSD v WL	large: $d = 1.01$, 95% CI: 0.76–1.26, $p < .001$

New Developments iCBT depression & anxiety

Authors	Theme	Outcome
Karyotaki et al. 2016, IPDMA (n – 2,705)	Predictors of treatment dropout unguided iCBT depression/ IPDMA	male gender, lower educational level, co-morbid anxiety, age RR 1.08 – 1.28; 0.94 (age); before 75% completion
Ebert et al 2016	Deterioration guided iCBT/ IPDMA	Reliable deterioration RR 0.47 if favour iCBT; low education moderator Recommendations
Rozental et al. 2014	Negative side effects	
Sander et al. 2016	Prevention of full diagnosis disorder	Lack of incidence rates & structured interviews Prevention works!
Buntrock, Riper et al. 2016	Prevention of full diagnosis depression	25 %
Ruxandra 2016	Differences Guided versus unguided becomes smaller	Minimal number required? CEA

Does Internet-based guided-self-help for depression cause harm? An individual participant data meta-analysis on deterioration rates and its moderators in randomized controlled trials

D. D. Ebert^{1*}, L. Donkin^{2,3}, G. Andersson^{4,5}, G. Andrews⁶, T. Berger⁷, P. Carlbring⁸, A. Rozenenthal⁸, I. Choi⁹, J. A. C. Laferton¹⁰, R. Johansson^{4,5}, A. Kleiboer³, A. Lange¹¹, D. Lehr¹², J. A. Reins¹², B. Funk¹², J. Newby¹³, S. Perini¹⁴, H. Riper³, J. Ruwaard³, L. Sheeber¹⁵, F. J. Snoek^{16,17}, N. Titov¹⁸, B. Ünlü Ince³, K. van Bastelaar¹⁶, K. Vernmark^{4,19}, A. van Straten³, L. Warmerdam³, N. Salsman²⁰ and P. Cuijpers³

¹Friedrich Alexander University Erlangen-Nuremberg, Erlangen, Germany; ²The Brain and Mind Research Institute, University of Sydney, NSW, Australia; ³Department of Clinical, Neuro and Developmental Psychology, VU University Amsterdam, the Netherlands; ⁴Department of Behavioural Sciences and Learning, Linköping University, Linköping, Sweden; ⁵Department of Clinical Neuroscience, Karolinska Institute, Stockholm, Sweden; ⁶Clinical Research Unit for Anxiety and Depression, School of Psychiatry, University of New South Wales at St Vincent's Hospital, Darlinghurst, NSW, Australia; ⁷Department of Clinical Psychology and Psychotherapy, University of Bern, Bern, Switzerland; ⁸Department of Psychology, Stockholm University, Sweden; ⁹Brain and Mind Centre, University of Sydney, Sydney, Australia; ¹⁰Psychologische Hochschule Berlin; ¹¹Department of Clinical Psychology, University of Amsterdam, Amsterdam, The Netherlands; ¹²Leuphana University Lüneburg, Germany; ¹³Clinical Research Unit for Anxiety and Depression, School of Psychiatry, University of New South Wales at St Vincent's Hospital, Darlinghurst, NSW, Australia; ¹⁴Centre for Emotional Health, Macquarie University, Australia; ¹⁵Oregon Research Institute, Eugene, Oregon, USA; ¹⁶Department of Medical Psychology, VU University Medical Center Amsterdam, The Netherlands; ¹⁷Academic Medical Center/University of Amsterdam, The Netherlands; ¹⁸CentreClinic and MindSpot Clinic, Department of Psychology, Macquarie University, Australia; ¹⁹Psykoloppartners, Private Practice, Linköping, Sweden; ²⁰School of Psychology, Xavier University, Cincinnati, USA

Background. Almost nothing is known about the potential negative effects of Internet-based psychological treatments for depression. This study aims at investigating deterioration and its moderators within randomized trials on Internet-based guided self-help for adult depression, using an individual patient data meta-analyses (IPDMA) approach.

Method. Studies were identified through systematic searches (PubMed, PsycINFO, EMBASE, Cochrane Library). Deterioration in participants was defined as a significant symptom increase according to the reliable change index (i.e. 7.68 points in the CES-D; 7.63 points in the BDI). Two-step IPDMA procedures, with a random-effects model were used to pool data.

Results. A total of 18 studies (21 comparisons, 2079 participants) contributed data to the analysis. The risk for a reliable deterioration from baseline to post-treatment was significantly lower in the intervention *v.* control conditions (3.36 *v.* 7.60; relative risk 0.47, 95% confidence interval 0.29–0.75). Education moderated effects on deterioration, with patients with low education displaying a higher risk for deterioration than patients with higher education. Deterioration rates for patients with low education did not differ statistically significantly between intervention and control groups. The benefit–risk ratio for patients with low education indicated that 9.38 patients achieve a treatment response for each patient experiencing a symptom deterioration.

Original Investigation

Effect of a Web-Based Guided Self-help Intervention for Prevention of Major Depression in Adults With Subthreshold Depression

A Randomized Clinical Trial

Claudia Buntrock, MSc; David Daniel Ebert, PhD; Dirk Lehr, PhD; Filip Smit, PhD; Heleen Riper, PhD; Matthias Berking, PhD; Pim Cuijpers, PhD

IMPORTANCE Evidence-based treatments for major depressive disorder (MDD) are not very successful in improving functional and health outcomes. Attention has increasingly been focused on the prevention of MDD.

OBJECTIVE To evaluate the effectiveness of a web-based guided self-help intervention for the prevention of MDD.

DESIGN, SETTING, AND PARTICIPANTS Two-group randomized clinical trial conducted between March 1, 2013, and March 4, 2015. Participants were recruited in Germany from the general population via a large statutory health insurance company (ie, insurance funded by joint employer-employee contributions). Participants included 406 self-selected adults with subthreshold depression (Centre for Epidemiologic Studies Depression Scale score ≥ 16 , no current MDD according to *Diagnostic and Statistical Manual of Mental Disorders* [Fourth Edition, Text Revision] criteria).

INTERVENTIONS All participants had unrestricted access to usual care (visits to the primary care clinician) and were randomized to either a web-based guided self-help intervention (cognitive-behavioral and problem-solving therapy supported by an online trainer; n = 202) or a web-based psychoeducation program (n = 204).

MAIN OUTCOMES AND MEASURES The primary outcome was time to onset of MDD in the intervention group relative to the control group over a 12-month follow-up period as assessed by blinded diagnostic raters using the telephone-administered Structured Clinical Interview for *DSM-IV* Axis Disorders at 6- and 12-month follow-up, covering the period to the previous assessment.

RESULTS Among 406 randomized patients (mean age, 45 years; 73.9% women), 335 (82%) completed the telephone follow-up at 12 months. Fifty-five participants (27%) in the intervention group experienced MDD compared with 84 participants (41%) in the control

 Supplemental content at jama.com


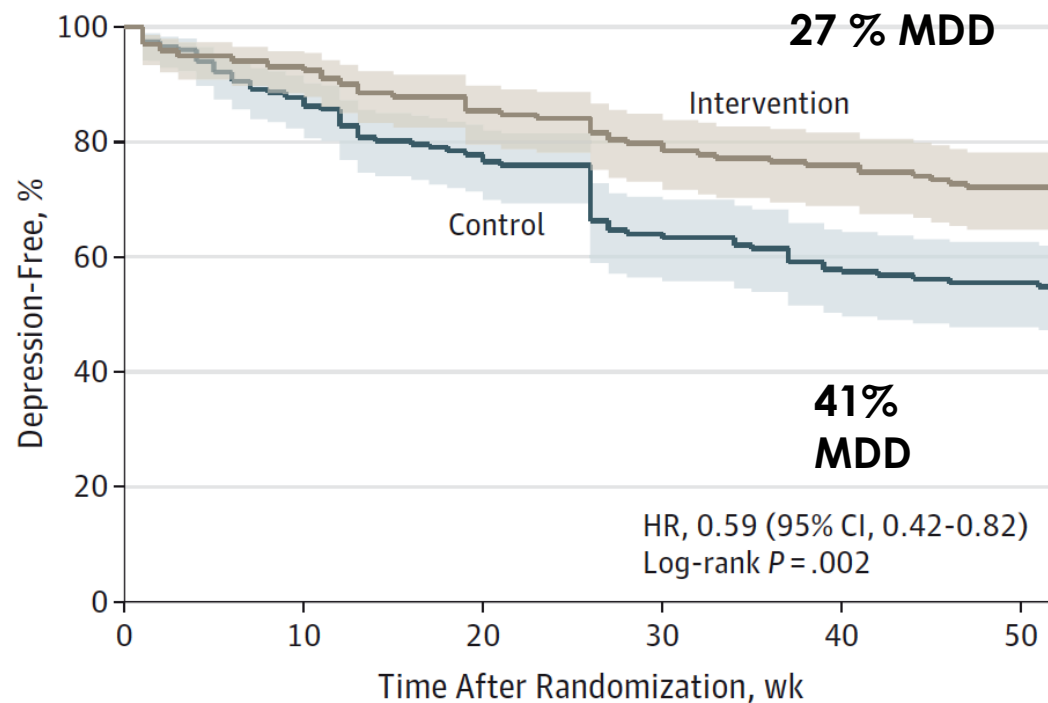
 CME Quiz at jamanetworkcme.com and CME Questions page 1898

Figure 2. Kaplan-Meier Survival Estimates of Time to Onset of Major Depressive Disorder by Study Group



No. at risk

Intervention	202	188	136	125	119	113
Control	204	179	129	106	96	92

Challenges

E-MENTAL- HEALTH RESEARCH



Challenges (1) iCBT

- Adherence :patients and therapists low?
- For whom are they effective and mechanisms of change (moderators/mediators?)
- Length of treatment and adherence impact on outcome not decisive yet, minimal required modules?

Challenges (2)

- Study designs
 - Recruitment difficulties
 - Representativeness of trial participants?
 - Duration of RCT's
- Outcome measures: next to symptomatology need for more functional outcomes (QoL, wellbeing)?

Challenges (3) Implementation

- Implementation and integration in routine care lag behind
- Reach:
 - Numbers & Target group characteristics
- Theory and empirically driven implementation

Pardigm shift

“Beyond Old Wine in New Bottles”



Maximizing the Impact of e-Therapy and Serious Gaming: Time for a Paradigm Shift

Theresa M. Fleming^{1,2*}, Derek de Beurs³, Yasser Khazaal⁴, Andrea Gaggioli^{5,6}, Giuseppe Riva^{6,7}, Cristina Botella^{7,8,9}, Rosa M. Baños^{8,9}, Filippo Aschieri⁶, Lynda M. Bavin¹, Annet Kleiboer¹⁰, Sally Merry¹, Ho Ming Lau¹¹ and Heleen Riper¹⁰

¹Department of Psychological Medicine, University of Auckland, Auckland, New Zealand, ²Department of Paediatrics: Child and Youth Health, University of Auckland, Auckland, New Zealand, ³Netherlands Institute for Health Services Research (NIVEL), Utrecht, Netherlands, ⁴Department of Psychiatry, University of Geneva, Geneva, Switzerland, ⁵Department of Psychology, Catholic University of Sacred Heart, Milan, Italy, ⁶Applied Technology for Neuropsychology Laboratory, Istituto Auxologico Italiano, Milan, Italy, ⁷Department of Psicología Básica, Clínica y Psicobiología, Castellón, Spain, ⁸Department of Personalidad, Evaluación y Tratamiento Psicológicos, Valencia, Spain, ⁹CIBER Fisiopatología Obesidad y Nutrición (CIBERON), Instituto Salud Carlos III, Valencia, Spain, ¹⁰Department of Clinical Psychology, Faculty of Behaviour and Movement Science, Vrije Universiteit Amsterdam, Amsterdam, Netherlands, ¹¹Department of Psychiatry, VU University Medical Center, Amsterdam, Netherlands

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Edited by:

Fotios C. Papadopoulos,
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Reviewed by:

M^a Angeles Gomez Martinez,
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*Correspondence:

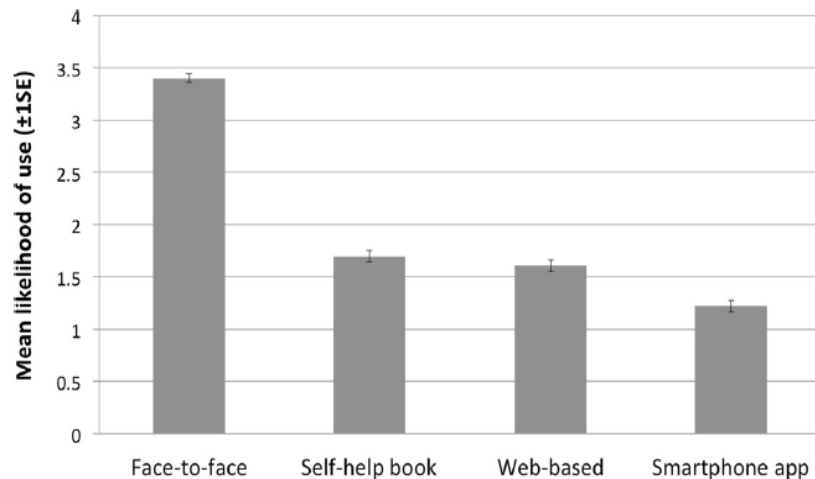
Theresa M. Fleming

Internet interventions for mental health, including serious games, online programs, and apps, hold promise for increasing access to evidence-based treatments and prevention. Many such interventions have been shown to be effective and acceptable in trials; however, uptake and adherence outside of trials is seldom reported, and where it is, adherence at least, generally appears to be underwhelming. In response, an international Collaboration On Maximizing the impact of E-Therapy and Serious Gaming (COMETS) was formed. In this perspectives' paper, we call for a paradigm shift to increase the impact of internet interventions toward the ultimate goal of improved population mental health. We propose four pillars for change: (1) increased focus on user-centered approaches, including both user-centered design of programs and greater individualization within programs, with the latter perhaps utilizing increased modularization; (2) Increased emphasis on engagement utilizing processes such as gaming, gamification, telepresence, and persuasive tech-

Acceptability

Musiat et al 2014, Understanding the acceptability of e-mental health - attitudes and expectations towards computerised self-help treatments for mental health problems. BMC Psychiatry.

Hanson et al (2015). Attitudes and Preferences towards Self-help Treatments for Depression in Comparison to Psychotherapy and Antidepressant Medication. Behav Cogn Psychother. 20:1-11



of use for face-to-face therapy and self-help interventions.

How acceptable is self-help?

Table 2. Mean preference ratings for the whole sample

Treatment	Mean	SD
Psychotherapy	1.77	1.25
Guided self-help	3.25	1.40
Antidepressants	3.76	1.86
Bibliotherapy	4.23	1.27
Internet-based self-help	4.68	1.32



Personalise
data driven



What do Patients & Professionals in routine care really need?





Engage

Understanding and Promoting Effective Engagement With Digital Behavior Change Interventions



Lucy Yardley, PhD,¹ Bonnie J. Spring, PhD,² Heleen Riper, PhD,³ Leanne G. Morrison, PhD,¹ David H. Crane, MSc,⁴ Kristina Curtis, PhD,⁵ Gina C. Merchant, PhD,⁶ Felix Naughton, PhD,⁷ Ann Blandford, PhD⁸

This paper is one in a series developed through a process of expert consensus to provide an overview of questions of current importance in research into engagement with digital behavior change interventions, identifying guidance based on research to date and priority topics for future research. The first part of this paper critically reflects on current approaches to conceptualizing and measuring engagement. Next, issues relevant to promoting effective engagement are discussed, including how best to tailor to individual needs and combine digital and human support. A key conclusion with regard to conceptualizing engagement is that it is important to understand the relationship between engagement with the digital intervention and the desired behavior change. This paper argues that it may be more valuable to establish and promote “effective engagement,” rather than simply more engagement, with “effective engagement” defined empirically as sufficient engagement with the intervention to achieve intended outcomes. Appraisal of the value and limitations of methods of assessing different aspects of engagement highlights the need to identify valid and efficient combinations of measures to develop and test multidimensional models of engagement. The final section of the paper reflects on how interventions can be designed to fit the user and their specific needs and context. Despite many unresolved questions posed by novel and rapidly changing technologies, there is widespread consensus that successful intervention design demands a user-centered and iterative approach to development, using mixed methods and in-depth qualitative research to progressively refine the intervention to meet user requirements.

(Am J Prev Med 2016;51(5):833–842) © 2016 American Journal of Preventive Medicine. Published by Elsevier Inc. All rights reserved.

Introduction

Engagement with health interventions is a precondition for effectiveness; this is a particular concern for digital behavior change interventions (DBCI),

that is, interventions that employ digital technologies such as the Internet, telephones, and mobile and environmental sensors.¹ Maintaining engagement can be especially difficult when DBCI are used without human support, typically leading to high levels of dropout and “non-usage attrition,”^{2,3} whereby participants do not sustain engage-

I

INTERVIDUALITEIT

Peers
Volunteers
Social Networks

“We zijn de mens gaan zien als het middelpunt van de kosmos, maar dat idee stamt nog maar uit de Renaissance.

Co-centraliteit is de toekomst: de mens niet als middelpunt, maar als onderdeel van een ecosysteem.”

Stefano Marzano
voormalig Creative Director van Philips Design

Ik ben Alice

een film van Sander Burger



Robots Humanize Care Moral Concerns Versus Witnessed Benefits for the Elderly

Article *in* Health Informatics Journal · January 2015

DOI: 10.5220/0005287706480653

E

“Ecologise”

- Prevention & Treatment & Implementation in dynamic ecological contexts
- Ecological Momentary Assessment & Intervention

Original Paper

Mobile Phone-Based Unobtrusive Ecological Momentary Assessment of Day-to-Day Mood: An Explorative Study

Joost Asselbergs^{1,2}, MSc; Jeroen Ruwaard^{1,2}, PhD; Michal Ejdys³, MSc; Niels Schrader³, MFA; Marit Sijbrandij^{1,2}, PhD; Heleen Riper^{1,2,4,5}, PhD

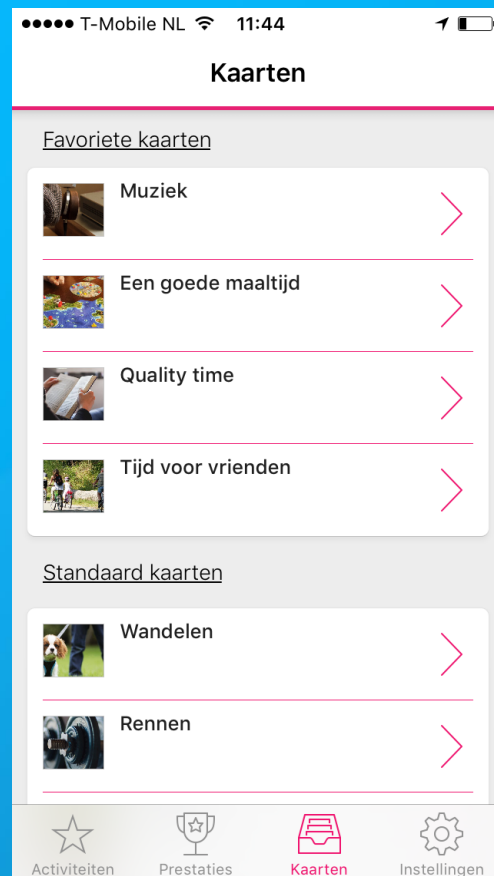
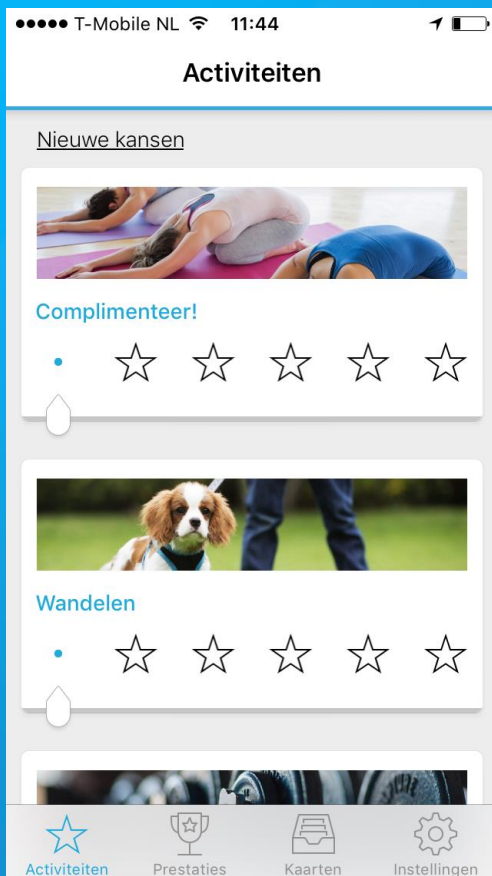
¹Faculty of Behavioural and Movement Sciences, Section Clinical Psychology, Vrije Universiteit Amsterdam, Amsterdam, Netherlands

²EMGO Institute for Health Care and Research, VU University Medical Centre, Amsterdam, Netherlands

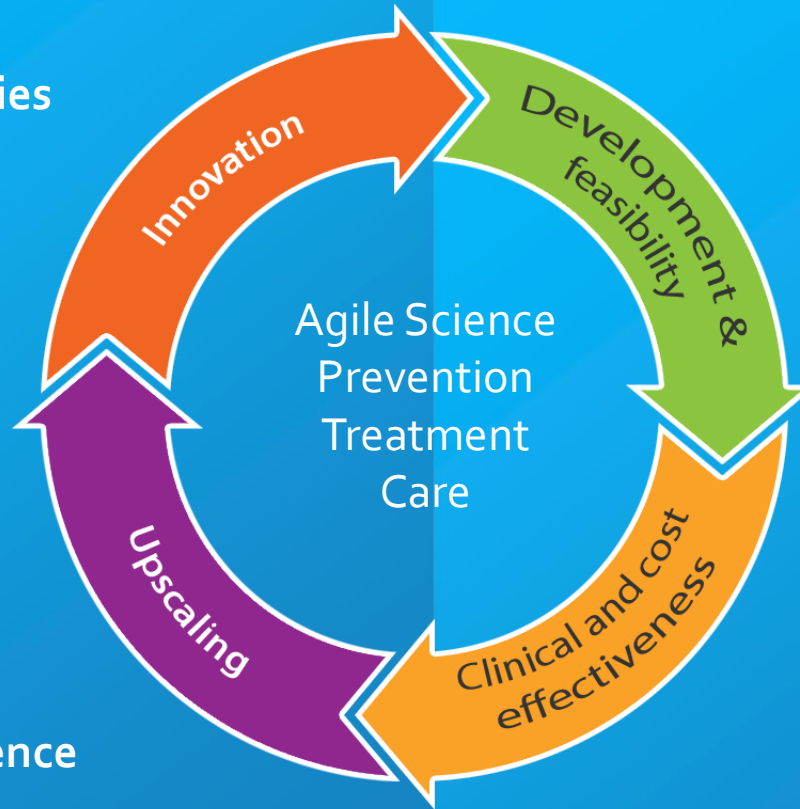
³Mind Design, Amsterdam, Netherlands

⁴GGZ inGeest, Amsterdam, Netherlands

⁵Health and Life Sciences Faculty, Telepsychiatry Unit, Southern Denmark University, Odense, Denmark



Beyond self report
Beyond the clinic
Beyond single realities
Within the brain



Beyond expert knowledge:
co-creation
JITAI

Beyond barriers &
success:
Implementation Science
Collective learning

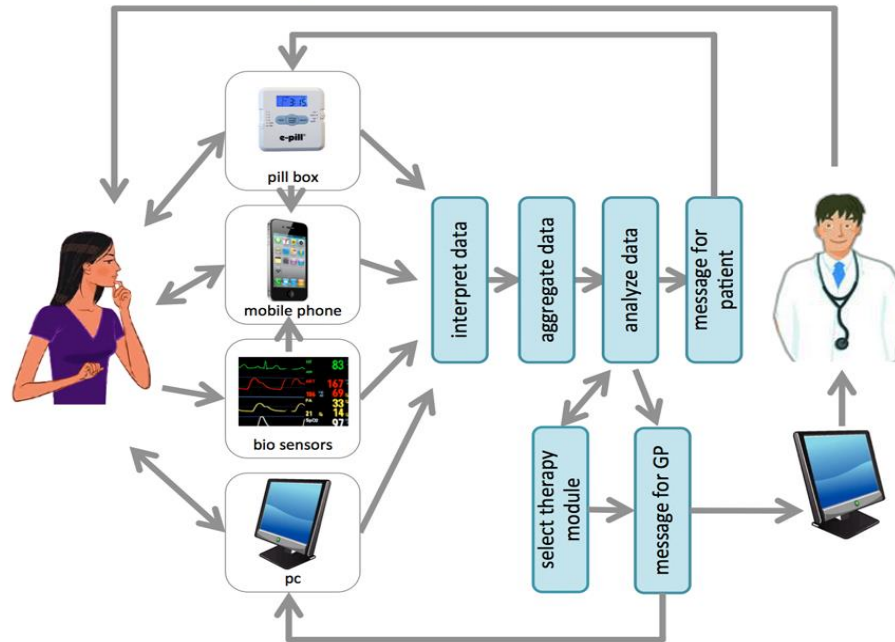
Beyond classical
'researchers'
Beyond RCT's:

- big small data &
- small big data
- Social media
- ETHICS

Fp7 en ZonMw: Moodbuster



ict4depression



- Warmerdam L, Riper H, Klein M, van den Ven P, Rocha A, Ricardo Henriques M, Tousset E, Silva H, Andersson G, Cuijpers P. (2012). Innovative ICT solutions to improve treatment outcomes for depression: the ICT4Depression project. *Stud Health Technol Inform*. 2012;181:339-43.
- Heleen Riper, Lisanne Warmerdam, Els Dozeman, Jeroen Ruwaard, Michel Klein, Pepijn Van der Ven, Artur Rocha5, Pim Cuijpers, Jan Smit & Gerhard Andersson (2013). Smartphone-delivered self-help treatment of depression: a pilot feasibility study of the Moodbuster platform in a Dutch adult population. *Internet Interventions* (in prep).

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E-COMPARED

European Comparative Effectiveness Research on Internet-based Depression Treatment

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1 : 10

More than 30 million Europeans
are affected by depression.
[Read about our mission ...](#)

Comparative Effectiveness

Regular care is compared to
'blended' treatment.
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Evidence-based

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NEWS

30th Jan 2017

Patient Advisory Board in action



MasterMind project



ImpleMentAll

ImpleMentAll project

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Creating evidence-based [#eHealth](#) [#implementation](#) strategies. Funded by European Union H2020 research & innovation programme. Grant agreement



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FOLLOWERS
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ImpleMentAll project @EU_ImpleMentAll · Jan 20

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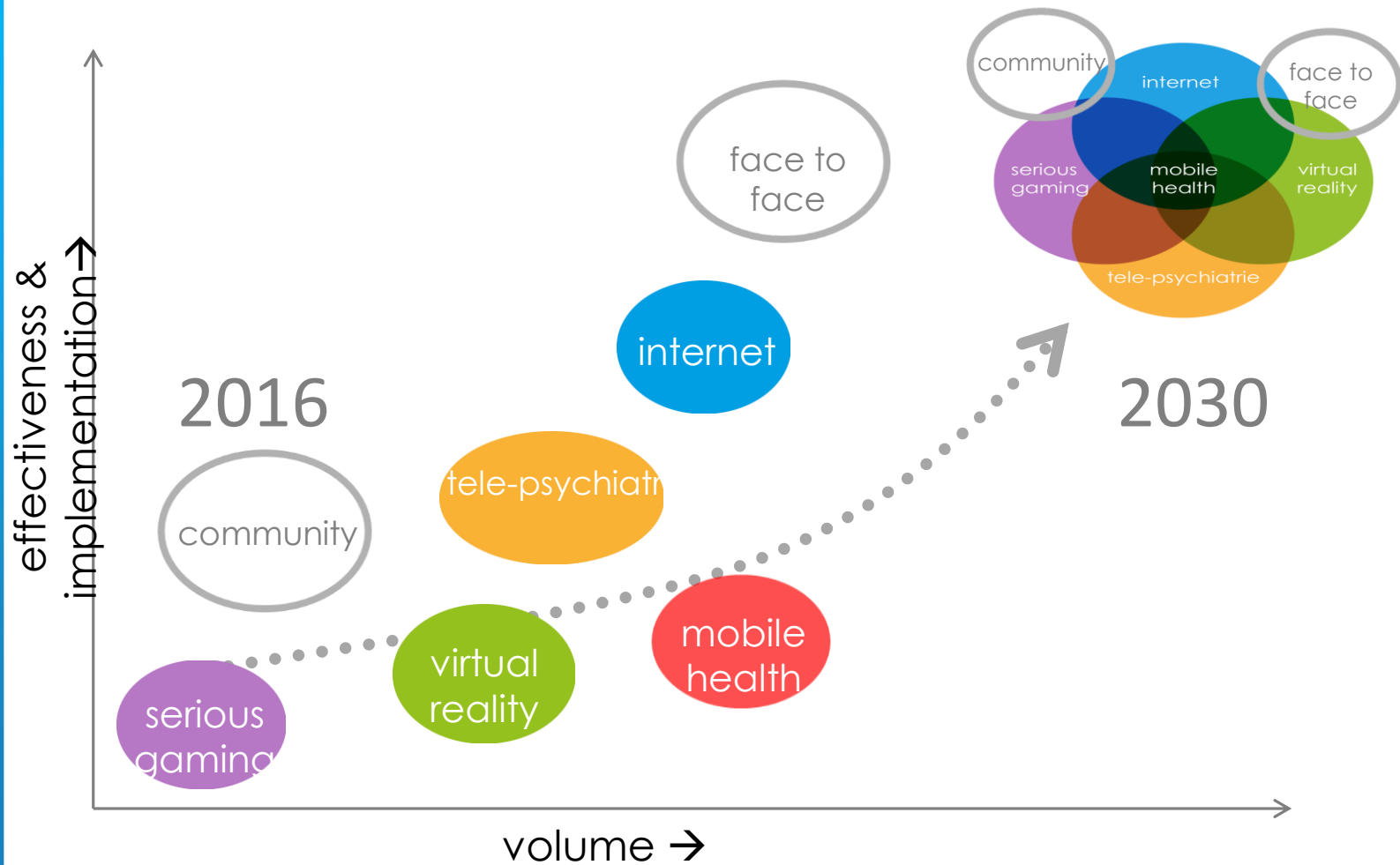
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