

Evaluation of the online-based self-help programme “*Selfapy*” in patients with unipolar depression: study protocol for a randomized, blinded parallel group dismantling study

Krämer Rico (✉ ricokrmer@gmail.com)

Charite Universitätsmedizin Berlin <https://orcid.org/0000-0002-0044-8687>

Stephan Köhler

Charite Universitätsmedizin Berlin

Study protocol

Keywords: major depressive disorders, internet-based intervention, blended treatment, specialized mental healthcare, routine practice, randomized controlled trial

Posted Date: July 28th, 2020

DOI: <https://doi.org/10.21203/rs.3.rs-26062/v1>

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Version of Record: A version of this preprint was published at Trials on April 9th, 2021. See the published version at <https://doi.org/10.1186/s13063-021-05218-4>.

Abstract

Background: This study aims to evaluate the online-based self-help programme “Selfapy” on a sample of depressive subjects and, furthermore, the impact of an unaccompanied version vs. a therapeutic accompanied version. Subjects are randomly assigned to the unaccompanied course (without weekly calls from a psychologist), an accompanied course (with weekly calls from a psychologist), or the control group. Various secondary parameters related to online self-help programmes, such as life satisfaction, therapeutic relationship, social activation, self-esteem, attitude towards Internet interventions and drop-out rates, are also recorded.

Methods: A sample size of 400 subjects will be included. Subjects must have at least a mild to moderate depressive episode (BDI-II and Hamilton Depression Scale) and then will be randomly assigned into one of three groups: (a) immediate access to the unaccompanied depression course of “Selfapy”, (b) immediate access to the accompanied depression course of “Selfapy”, or (c) access to “Selfapy” after a 24-week delay (waiting list). The intervention period will last for a period of 12 weeks. Diagnostic assessments will take place at four different points in time: T1 (at baseline before the treatment), T2 (6 weeks after the start of the intervention), T3 (12 weeks after the start of the intervention; end of program) and T4 (3 months after completion of the treatment follow-up).

Conclusion: The effectiveness of the online self-help program “Selfapy” for depression, is to be investigated in a randomized, controlled, blinded study. Additionally, this study will utilize a “dismantled” approach to enable the comparison of the accompanied and

Trial registration: Current Controlled Trial DRKS00017191

Date of registration: 14.06.2019

Background

Depression is a common and severely distressing condition with high mortality from suicide and other factors [1, 2]. Depressive disorders are one of the largest global burdens with around 350 million people worldwide [3]. However, the mild to moderate forms (29% of primary care patients) occur even more frequently than the severe depressions (only 9.5% of primary care patients) [4]. Subclinical depression refers to those who do not fully meet the criteria of a depressive episode (ICD-10) or a major depression (DSM-5) [5]. Subclinical forms of depression are associated with considerable impairment, economic costs, and increased risk for developing major depression [4, 6, 7].

Different treatment methods (e.g. cognitive behavioural therapy; pharmacotherapy) have been shown their efficacy in treatment of depression. [8]. The current options for an effective treatment of patients with mild to moderate depressive symptoms do not meet the requirements because there are too few offers with low-threshold access [9, 10]. In addition, there are few well-studied randomized controlled trials (RCTs) for low-threshold Internet interventions for those who have these mild to moderate

depressive symptoms. Low-threshold psychosocial interventions, including online self-help programmes, can be used as a complementary treatment, especially in the case of mild depression [11]. In general, over 20 randomized controlled trials (RCTs), several meta-analyses and systematic reviews in the past have proven their effectiveness in reduction of depressive symptoms compared to different control conditions [e.g., 12]. Drop-out rates in web-based interventions are typically high, especially in self-guided web-based interventions [13].

Cognitive behaviour therapy (CBT) is ideal for the implementation of online interventions due to its highly structured, directive and standardized nature, as well as its focus on psychoeducation and homework [9]. A systematic review and meta-analysis including 8 randomized studies with regard to iCBT ([internet-delivered Cognitive Behaviour Therapy](#)) was carried out by Ting et al. [14]. Compared to the inactive control groups, the iCBT programmes were significantly more effective (SMD = - 0.28, CI [- 0.42, - 0.14]; I² = 49%) in reducing depressive symptoms.

In general, there are already few online interventions for depression, but more high-quality trials are needed to proof efficacy [9-11, 15]. Online programmes are offered with or without therapeutic support. Both forms can also be performed with the accompaniment of a clinical psychologist (accompanied) or in combination with conventional face-to-face therapy (blended). Unaccompanied programs show small effect sizes in the treatment of depressive symptoms compared to the control group [16]. Unlike unaccompanied self-help programmes, accompanied self-help approaches involve regular contact with a clinical psychologist [17]. Accompanied self-help approaches also differ with respect to the intensity of therapeutic contact [15]. Accompanied online depression interventions show medium to large effect sizes compared to the control group [18,19]. Meta-analyses provide some evidence that programmes that combine elements of traditional face-to-face therapy with an online programme are more effective than unaccompanied online programmes [18, 20]. Further research is necessary to draw strong conclusions regarding the differences one might experience in either an accompanied or an unaccompanied online self-help programme.

The aim of this study is to validate the effectiveness of the online self-help program "Selfapy" in an RCT. "Selfapy" offers the possibility of comparing an accompanied and unaccompanied version within the same program. A randomized, controlled parallel-group study will be performed, and the differences between accompanied and unaccompanied versions of the courses, as well as their effects on treatment outcomes, will be evaluated.

Trial objectives

We use the Beck Depression Inventory-II (BDI-II) [21] as the primary outcome parameter. The primary outcome will be evaluated through reported changes in the self-assessment of depressive symptoms following the completion of the programme after 12 weeks. The secondary parameters to be examined include the program's effects on symptoms such as general quality of life, physical complaints, social activation, therapeutic alliances, attitudes, self-esteem and cases of comorbidity. Additionally, differences in efficacy for the accompanied group, the unaccompanied group and the control group will be evaluated.

Main hypotheses

1. BDI-II scores will be significantly lower in both study groups following the 3-month “Selfapy” programme than in the control group.
2. We expect higher depressive symptoms (BDI-II) in the unaccompanied group compared to the accompanied group.

Secondary hypotheses

1. The drop-out rate is expected to be higher for the unaccompanied group than for the accompanied group.
2. The strength of the therapeutic relationship will be significantly higher in the accompanied group than in the unaccompanied group.
3. Positive attitudes towards Internet interventions will increase for the accompanied group as well as for the unaccompanied group when compared with reported attitudes at baseline. Increased scores in positive attitudes towards Internet interventions will be significantly higher for the accompanied group than for the unaccompanied group.
4. Quality of life, social activation, and self-esteem scores will increase significantly over the duration of the three-month programme compared to scores taken at baseline and compared to scores in the control group. The increase in these parameters will be significantly higher for the accompanied group than for the unaccompanied group.

Methods

Recruitment

A total of 400 subjects with of mild to moderate depressive symptoms are recruited via the “Selfapy” website, advertising on German television and in numerous information brochures from health insurance companies. The central recruiting tool is a study website (www.selfapy.de/studie/), where interested people can register to participate. If a person decides to participate by giving their consent, they will be immediately directed towards the determination of the deadline for the incoming survey (Mini International Neuropsychiatric Interview: MINI [22], Hamilton Depression Scale: HRSD-24 [23]). Electronic informed consent has been recognized by previous ethics committees as a safe and ethical means of giving consent [24] and is used in this study.

Inclusion and exclusion criteria

To clarify the inclusion and exclusion criteria, interviews will be conducted with all subjects via telephone (MINI, HRSD-24). To be eligible, participants must 1) be between 18 and 65 years old, 2) have sufficient German language skills, 3) have uninterrupted access to the Internet, 4) score 12 or higher on the BDI-II, 5) provide their electronic data with the “declaration of consent”, and 6) have a main diagnosis of a mild to moderate depressive episode or dysthymia (according to the MINI).

Subjects were excluded if they met one of the following criteria: 1) they have been previously diagnosed with bipolar disorder; 2) they are currently experiencing or have experienced psychotic symptoms or substance dependence in the past; or 3) they are currently experiencing or have experienced suicide ideations (operationalized via HRSD-24 – subjects are excluded if they score 3 or over on suicidality items) in the past.

A primary diagnosis of a condition other than depression is not an exclusion criterion, because we want to represent routine care. An active substance dependency is an exclusion criterion, as this conflicts with the conduction of the program.

Subjects who do not meet our inclusion criteria due to severity of illness are encouraged to seek professional help.

Adequate language skills are determined during the initial diagnosis by the MINI and HRSD-24. Our inclusion criteria were critically discussed in the study board.

Randomization and blinding

Subjects who meet the inclusion criteria will be randomly divided into one of three groups: (a) immediate access to the unaccompanied depression course of "Selfapy", (b) immediate access to the accompanied depression course of "Selfapy" or (c) access to "Selfapy" after a delay of 24 weeks (control group).

Block randomization is performed by an independent researcher using a random number assignment plan for this list, which was created by a computer controlled random number generator. These numbers are assigned blindly, i.e. subjects and researchers have no knowledge of which group a patient belongs to. The subjects are assigned to one of the three groups in a ratio of 2: 1. The subjects will be informed by email about the result of the random assignment. The email contains a code with which the subjects can start the intervention directly. Diagnostic interviewers are blind to the assigned group of subjects. An illustration of the patient flow can be found in Figure 1.

Intervention

"Selfapy" is a browser-based commercial program for reducing depression symptoms (<https://www.selfapy.de>). To achieve this goal, the user receives instructions on evidence-based methods and exercises in the areas of CBT, system therapy, behavioural therapy and mindfulness training. The "Selfapy" program is available in an accompanied and unaccompanied version.

Subjects in the intervention groups (accompanied and unaccompanied) have free access to the 12-week Internet-based self-help treatment. The online course is divided into 12 different modules. Every week a new topic is discussed, such as "self-awareness", "challenging negative thoughts" or "sociability". The weekly modules consist of informative texts, videos, interactive exercises and worksheets. Table 1 contains the 12 module topics and a brief description of these and the exercises they contain. The program also includes a so-called "classroom" by allowing the psychologist to follow the program of the

subjects. The "classroom" includes integrated chat system through which psychologists and subjects can communicate.

Accompanied group

In the accompanied version of the programme, the subjects is supervised by an experienced psychotherapists in training throughout the duration of the programme. In the beginning, the expert and the subject get to know each other and consequently hold 20- to 25-minute conversations by phone on a weekly basis. During these discussions with the psychologist, the programme content is explained, and questions are answered. In a one-hour training session, all clinical psychologists who were interested in accompanying subjects were informed. Contents included general information on the study, risks and their handling, discussion of the non-accident concept, the handling and documentation of drop-outs and the standardization of the discussion content.

Unaccompanied group

In the unaccompanied version, the subject works independently throughout the programme.

A chat function with a psychotherapist in training is available in the "classroom", which can be used to clarify questions for improved understanding. There is no content-based discussion about the chat. The psychologist was also trained here.

Control group

At the end of the follow-up period, subjects in the control group will receive free access to the online intervention programme. They are free to choose the type of access to the programme of their choice (accompanied or unaccompanied). The control group received isolated, nonspecific mood-stabilizing activities such as body scan instructions, guided abdominal breathing, and guided imagery. Subjects in the control group will not receive treatment or support from the researchers. However, they are free to seek any other help they desire, including pharmacological and psychological treatments. All concurrently used treatments will be measured repeatedly through self-report. Subjects in the control group will receive access to the intervention after the last follow-up assessment, 12 weeks after the baseline assessment. The control group could not participate in "Selfapy" within 24 weeks. Duplicate registrations are to be prevented by comparing email addresses. Subjects in the interviews are also specifically asked for double registrations.

Responses to crises and suicidality

A physical overuse can be excluded. The online survey at the time of measurement T1, T3 and T4 of the survey will take about 60 minutes. The processing time for T2 is about 30 minutes. A general side effect of the interventions could possibly be a lack of treatment success. In the case of severe depressive symptoms, the subjects are shifted to inpatient or outpatient psychotherapy. Suicidality is explored as part of the evaluation and rating and each rater has an emergency plan. Subjects allowed to attend

ongoing psychotherapy. This depicts everyday treatment and ensures high external validity. However, all potentially relevant factors for treatment outcome are taken into account for the statistical evaluation. The study design was approved by the ethics committee of the medical faculty of the Charité University Medicine Berlin.

Table 1. Overview of course content

Module	Content	Exercises
Your beginning	A questionnaire is used to collect general data about this person and his/her problems.	Lifeline; problem cakes; miracle question
Target selection		
First insights	In this module, the user is brought closer to the connection between thinking, feeling and acting. Based on this triangular connection, our course concept is explained to him/her.	Your personal triangles
Resources	Explanation and gathering of power sources. Prepare the behavioural activation. Different methods to assist users in collecting power sources.	Evaluation daily protocol; power source images; treasure chest; resource walk
Behavioural activation	Actively plan power sources during the day.	Activity plan
Automatic thoughts	These automatic thoughts and thinking patterns are what we want to address this week.	Automatic thoughts; core beliefs
Negative thoughts	Thinking about reality, thinking realistically	Think realistically
Self-esteem	Also refer to the resources.	-
Self-efficacy	Therefore, this week will make you aware of your recent successes. This will enable you to better allocate your power reserves and increase confidence in your abilities.	"Your personal achievements - be proud of yourself"
Social environment + stigma + social support	"This week's focus is on your environment and your social environment, and when we talk about sharing with our environment, another factor is very important: our social support can help us deal appropriately and successfully with our stress."	"Difficult communication -your backing"
Mindfulness + excursus: pleasure training	"Mindfulness is the focus of this week, and we want to work with you to cultivate a mindful approach to you and your environment, because a mindful attitude to life will help you to improve your stress management. Therefore, a well-being workout can help you to feel more joie de vivre and increase your well-being.	Mental note; mindfulness in everyday life; sitting meditation; body scan; your enjoyment moments
Solve problem	This week, we would like to introduce you to a training that will enable you to perceive a specific problem, capture potential responses in a problematic situation, and develop the competence to implement a particular course of action to solve this problem optimally.	Problem-solving training
Relapse cases	Finally, we want to tie up your anti-anxiety package with you. It should help you to recognize when the stress threatens to become too much again. We want to show you once more how you can best handle the stress when it cannot be avoided.	Risk situations; early warning symptoms; first aid plan; relapse protocol

Assessments

Assessments will be made at four distinct points in time. Baseline (T1, study entrance), six weeks after baseline (T2), three months after baseline (T3, end of the program), and twelve weeks after the completion of the program (T4, follow-up). All other questionnaires are completed by the subjects (self-rating). All MINI and HRSD-24 interviews will be conducted by the same two trained interviewers, namely, a psychologist and a medical student. The training of the interviewers was conducted at the Charité

Department of Psychiatry and Psychotherapy with depressive patients and was followed by a discussion of the ratings guided by a psychiatric consultant.

Table 2. Assessment tools utilized throughout the programme

Assessment timeframe	Assessment instrument
Pre (T ₁)	Self-assessment – Questionnaires: BDI-II; QIDS-SR16; BAI; WHOQOL-BREF; SWOP-K9; WAI-SR; APOI; SASS; Bado
	Assessment by a therapist – Questionnaires: MINI; HRSD-24
During (T ₂)	Self-assessment – Questionnaires: BDI-II; QIDS-SR16; BAI; WAI-SR; APOI
Post (T ₃)	Self-assessment – Questionnaires: BDI-II; QIDS-SR16; BAI; WHOQOL-BREF; SWOP-K9; WAI-SR; APOI; SASS; Bado Assessment by a therapist – Questionnaires: HRSD-24
Follow-up (T ₄)	Self-assessment – Questionnaires: BDI-II; QIDS-SR16; WHOQOL-BREF; Bado Assessment by a therapist – Questionnaires: HRSD-24

Abbreviations. MINI = Mini International Neuropsychiatric Interview; BDI-II = Beck Depression Inventory-II; QIDS-SR16 = Quick Inventory of Depressive Symptomatology; BAI = Beck Anxiety Inventory; WHOQOL-BREF = WHO Quality of Life-BREF; SWOP-K9 = Self-Efficacy, Optimism, and Pessimism Scale; WAI-SR = Working Alliance Inventory - Short Revised; APOI = Attitudes towards Psychological Online Interventions Questionnaire; Bado = basic documentation; HRSD-24 = Hamilton Depression Scale; SASS = [Social Activity Self-Assessment Scale](#)

Outcome measures

Primary outcome measure

The primary outcome measure is the change in the self-assessment of depressive symptoms after the completion of the programme using the BDI-II throughout all assessment points.

Secondary outcome measures

Changes in depressive symptoms will be additionally assessed at baseline (T1) and post (T3) after 12 weeks as well as at follow-up (T4) using observer-rated inventories, namely, the HRSD-24 and the QIDS [25].

Furthermore, changes in the self-assessment of anxiety-related symptoms will be analysed using the BAI [26]. Changes in self-esteem will be evaluated using the SWOP-K9 [27]. Similarly, the SASS [28] questionnaire will be utilized to record the levels of social activation. The WHOQOL-BREF [29] will be used

to assess the impact of the programme on physical changes and life satisfaction. The APOI captures attitudes towards online interventions [30].

The WAI [31] is an employment inventory for the collection of therapeutic alliances and is used to evaluate work alliances. The ACSA is a self-anchoring rating scale for subjective well-being that was originally developed as a simple method to measure quality of life consecutively in the patient-physician relationship [32]. The Bado sheet is used to assess the impact of the programme on subjects' use of the healthcare system, including contact with health care providers, the number of therapy sessions, and the amount of contact with psychotherapists and psychiatrists.

Engagement and usage measures for iCBT

The log files on the online "Selfapy" platform will be utilized to keep track of certain data. These data include but are not limited to the number of times a subject visit the platform, the amount of time elapsed between logins, and the amount of correspondence shared between a subject and his/her respective therapist. As an addendum, the platform's track and change functionalities shall also enable data to be collected on subject exact amount of usage on the platform. This includes the frequency of visits to the online modules, how much time a subject spends on each module, and the modules that have been completed by the subject and in which order. All the aforementioned information will provide an overall picture of the efficiency and success of the individual elements of the programme.

Sample size

The between-group effect size estimate is based on meta-analytic evidence for the effect size

observed in unaccompanied psychological interventions ($d = 0.28$) [16]. Treatment effect sizes in a sample with mild to moderately depressed subjects may be quite low. We conservatively reduced the estimated effect size to $d = 0.23$ [33].

Based on this effect size, a power of 0.80 and an alpha level of 0.05, we need a total of 200 subjects to address our hypotheses. The sample size was further estimated based on an expected drop-out rate of 50%. Drop-out rates in previous studies that used similar interventions ranged between 9% [9, 10] and 50% [34]. Based on this assumption, we would need a total of 400 subjects. The sample size was calculated using G-Power [35]. In addition, a comparison will be drawn between the unaccompanied and the accompanied version of the online programme. The previously expanded experimental groups are compared to a control group, resulting in a total of three study groups to which the subjects are randomly assigned in a ratio of 2:1 (accompanied group: $n=160$, unaccompanied group: $n=160$, control group: $n=80$).

Planned statistical analysis

The recorded data from different points in time (T1, T2, T3, and T4 for both treatment groups and T1, T2, and T3 for the treatment groups in comparison to the control group) will be analysed. Treatment

outcomes for 200 subjects (pre-post difference) will be analysed using intention-to-treat analysis, effect strength calculation (in between) and a linear mixed model (based on primary outcome measures). Effect size calculations (before and after therapy success) are performed. Independent t-tests and χ^2 tests will be used to estimate between-group differences in demographics and pre-treatment measures at baseline.

To assess the magnitude of treatment effects, Cohen's [36] effect sizes for each time point will be calculated by dividing mixed model parameter estimates of fixed effects at each post-treatment assessment by the pooled standard deviation of baseline scores. Effect sizes under 0.2 are deemed small, 0.5 moderate and 0.8 large [36]. Differences in response rates, remission rates and adherence rates will be examined using t-tests and χ^2 tests.

Discussion

The aim of this study is to evaluate the effectiveness of the online self-help program "Selfapy" in a randomized-controlled-blinded parallel group study. "Selfapy" was developed to become a low-threshold and affordable option for people dealing with depressive symptoms, especially for patients with subclinical to moderate depression symptoms [e.g. 16, 19, 37].

In this study, both accompanied and unaccompanied online intervention programs are evaluated. This study will give further insight in the comparison of accompanied and unaccompanied variations within the same program, which will add the value of the component of accompaniment (dismantling approach; [38]).

In addition to our primary outcome (change of depressive symptoms), we will further investigate important other parameters such as life satisfaction, therapeutic relationships, social activation, self-esteem and attitudes. Additionally, an economic evaluation will be conducted from a healthcare perspective in future research.

Two weekly ACSA assessments in the intervention groups will allow us to identify meaningful patterns of early changes in life satisfaction during online treatment. These patterns will be investigated to predict outcome at treatment termination and over the follow-up period, as well as drop-out rates or the number of times subject participate in online treatment. These regular measurements may yield patterns that indicate the outcome of discontinuation of the treatment and allow for the follow-up period [39, 40].

A major strength of this study are the low threshold criteria of inclusion, as anyone suffering from depressive symptoms can sign up through the study website without further requirements. These measures will improve the external validity of our study. This strength may also be regarded as a limitation, as it may result in a relatively heterogeneous group of patients [33]. The limitations of the study include the possibility of the parallel use of the health system, which could cause changes in symptoms, although we assess the health care use by questionnaires. It should also be taken into consideration that primary diagnoses other than depression are also included in the study.

Conclusion

We evaluate the efficacy of the self-help programme “Selfapy” that offers low-threshold treatment to various patients also with mild to moderate depressive symptoms. By the dismantling approach, we can investigate the value of accompanied vs. unaccompanied variations within the same programme. Positive and meaningful results are expected in this study, which may have an impact on the acceptance and implementation of such programmes.

Trial Status

Currently recruiting (Ncurrent = 293 as of April 28th 2020).

Approximate date when recruitment will be completed: June 2020

Trial registration: German Clinical Trials Register (DRKS): DRKS00017191. Registered 14 Juni 2019, https://www.drks.de/drks_web/navigate.do?navigationId=trial.HTML&TRIAL_ID=DRKS00017191

List Of Abbreviations

ACSA: Anamnestic Comparative Self-Assessment; APOI: Attitudes towards Psychological Online Interventions Questionnaire; Bado: basic documentation; BAI: Beck Anxiety Inventory; BDI-II: Beck Depression Inventory-II; CBT: cognitive behavioural therapy; HRSD-24: Hamilton Depression Scale; CI: confidence interval; iCBT: [internet-delivered Cognitive Behaviour Therapy](#); MINI: MINI International Neuropsychiatric Interview; RCT: randomized controlled trial; SASS: Social Activity Self-Assessment Scale; SMD: standardized mean difference; SWOP-K9 = Self-Efficacy, Optimism and Pessimism Scale; QIDS-SR: Quick Inventory of Depressive Symptomatology Self-Report; WAI: Working Alliance Inventory; WHOQOL-BREF: WHO Quality of Life-BREF

Declarations

Ethics approval and consent to participate

The protocol for this study was approved by the Ethics Committee on Campus Benjamin Franklin (application number EA/047/19). Signed informed consent to participate in the study will be obtained from all participants.

Consent for publication

Not applicable.

Availability of data and materials

Not applicable.

Competing interests

The study was funded by a commercial organization (Selfapy GmbH).

The authors declare that they have no competing interests.

The author RK worked for company "Selfapy" in the context of a student employment (11/2016 - 9/2017).

SK has no conflicts of interest with Selfapy GmbH.

Funding

The sole source of funding for the study is Selfapy GmbH. The research group for mood disorders at the Charité was asked by Selfapy to independently evaluate its product so that it can be scientifically evaluated to the best of its knowledge. The funding agency had an influence on the selection of the survey instruments when designing the study. The funding agency had no influence on the collection, analysis and interpretation of the data and on the creation of the written manuscript.

Authors' contributions

All authors contributed to the design of the study. RK and SK drafted the manuscript and coordinated the recruitment of patients and the data collection. All authors read and approved

Acknowledgements

Not applicable.

Authors' information

¹Department of Psychiatry and Psychotherapy, Charité – Universitätsmedizin Berlin, Campus Mitte, Berlin, Germany

References

1. Gilman SE, Sucha E, Kingsbury M, Horton NJ, Murphy JM, Colman I. Depression and mortality in a longitudinal study: 1952-2011. *CMAJ*. 2017;189:E1304-10.
2. Laursen TM, Musliner KL, Benros ME, Vestergaard M, Munk-Olsen T. Mortality and life expectancy in persons with severe unipolar depression. *J Affect Disord*. 2016;193:203-7.
3. GBD 2016 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990-2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet* 2017;390:1211-59.

4. Rowe SK, Rapaport MH: Classification and treatment of sub-threshold depression. *Curr Opin Psychiatry* 2006, 19:9–13.
5. Bertha EA, & Balázs, J. (2013). Subthreshold depression in adolescence: a systematic review. *Eur Child Adolesc Psychiatry* 22:589–603.
6. Fava GA: Subclinical symptoms in mood disorders: pathophysiological and therapeutic implications. *Psychol Med* 1999, 29:47–61.
7. Rodriguez MR, Nuevo R, Chatterji S, yuso-Mateos JL: Definitions and factors associated with subthreshold depressive conditions: a systematic review. *BMC Psychiatry* 2012, 12:181.
8. Cuijpers P, Noma H, Karyotaki E, Vinkers CH, Cipriani A, Furukawa TA: A network meta-analysis of the effects of psychotherapies, pharmacotherapies and their combination in the treatment of adult depression. *World Psychiatry* 2020, 19:92–107.
9. Berger T, Caspar F, Richardson R, Kneubuhler B, Sutter D, Andersson G. Internet-based treatment of social phobia: a randomized controlled trial comparing unguided with two types of guided self-help. *Behav Res Ther*. 2011;49:158-69.
10. Berger T, Hammerli K, Gubser N, Andersson G, Caspar F. Internet-based treatment of depression: a randomized controlled trial comparing guided with unguided self-help. *Cogn Behav Ther*. 2011;40:251-66.
11. Berger T, Stolz T, Schulz A. Internetbasierte geleitete selbsthilfeansätze bei angststörungen und depressionen. *Fachz Onlineberatung Comput Kommun*. 2013;9:1-16.
12. Ahern E, Kinsella S, Semkovska M. Clinical efficacy and economic evaluation of online cognitive behavioral therapy for major depressive disorder: a systematic review and meta-analysis. *Expert Rev Pharmacoecon Outcomes Res*. 2018;18:25-41.
13. Karyotaki E, Kleiboer A, Smit F, Turner DT: Predictors of treatment dropout in self guided web-based interventions for depression: an 'individual patient data' meta-analysis. *Psychol Med*. 2015 Oct, 45(13):2717-26.
14. Zhou T, Li X, Pei Y, et al. Internet-based cognitive behavioural therapy for subthreshold depression: a systematic review and meta-analysis. *BMC psychiatry*. 2016;16(1):356.
15. Titov N. Internet-delivered psychotherapy for depression in adults. *Curr Opin Psychiatry*. 2011;24:18-23.
16. Cuijpers P, Donker T, Johansson R, Mohr DC, van SA, Andersson G: Selfguided psychological treatment for depressive symptoms: a metaanalysis. *PLoS One* 2011, 6:e21274.
17. Berger T. Internetbasierte interventionen bei psychischen störungen. Göttingen: Hogrefe Verlag; 2015.
18. Andersson G, Cuijpers P. Internet-based and other computerized psychological treatments for adult depression: a meta-analysis. *Cogn Behav Ther*. 2009;38:196-205.

19. Johansson R, Andersson G: Internet-based psychological treatments for depression. *Expert Rev Neurother* 2012, 12:861–869.
20. Spek V, Cuijpers P, Nyklicek I, Riper H, Keyzer J, Pop V. Internet-based cognitive behaviour therapy for symptoms of depression and anxiety: a meta-analysis. *Psychol Med*. 2007;37:319-28.
21. Hautzinger M, Keller F, Kühner C. BDI-II. Beck-depressions-inventar. Revision. 2. Auflage. Frankfurt: Pearson Assessment; 2009.
22. Sheehan DV, Lecrubier Y, Sheehan KH, Amorim P, Janavs J, Weiller E, et al. The mini-international neuropsychiatric interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *J Clin Psychiatry*. 1998;59:22-33;quiz 4-57.
23. Hamilton M. A rating scale for depression. *J Neurol Neurosurg Psychiatry*. 1960;23:56-62.
24. Dzeyk W. Ethische dimensionen der online-forschung. *Köln Psychol Stud*. 2001;6:1-30.
25. Rush AJ, Trivedi MH, Ibrahim HM, Carmody TJ, Arnow B, Klein DN, et al. The 16-item quick inventory of depressive symptomatology (QIDS), clinician rating (QIDS-C), and self-report (QIDS-SR): a psychometric evaluation in patients with chronic major depression. *Biol Psychiatry*. 2003;54:573-83.
26. Beck AT, Epstein N, Brown G, Steer RA. An inventory for measuring clinical anxiety: psychometric properties. *J Consult Clin Psychol*. 1988;56:893-7.
27. Scholler G, Fliege H, Klapp BF. Fragebogen zu selbstwirksamkeit, optimismus und pessimismus. Restrukturierung, itemselektion und validierung eines instruments an untersuchungen klinischer stichproben. *Psychother Psychosom Med Psychol*. 1999;49:275-83.
28. Duschek S, Schandry R, Hege B. Soziale aktivität selbstbeurteilungs-skala (SASS). Diagnostik sozialer funktionsfähigkeit bei depressiven störungen. Göttingen: Beltz Test; 2003.
29. Angermeyer MC, Kilian R, Matschinger H. WHOQOL-100 und WHOQOL-BREF. Handbuch für die deutschsprachige version der WHO instrumente zur erfassung der lebensqualität. Göttingen: Hogrefe; 2000.
30. Schroder J, Sautier L, Kriston L, Berger T, Meyer B, Spath C, et al. Development of a questionnaire measuring attitudes towards psychological online interventions-the APOI. *J Affect Disord*. 2015;187:136-41.
31. Munder T, Wilmers F, Leonhart R, Linster HW, Barth J. Working alliance inventory-short revised (WAI-SR): psychometric properties in outpatients and inpatients. *Clin Psychol Psychother*. 2010;17:231-9.
32. Bernheim J, Avonts G, de Schamphelleire D, Gelissen I, Sauer AM. Anamnestic comparative self assessment (ACSA) to correlate medical and psychosocial variables with subjective quality of life of cancer patients. *Proc Am Soc Clin Oncol*. 1985;4:248.
33. Klein JP, Berger T, Schroder J, Spath C, Meyer B, Caspar F, et al. The EVIDENT-trial: protocol and rationale of a multicenter randomized controlled trial testing the effectiveness of an online-based psychological intervention. *BMC Psychiatry*. 2013;13:239.
34. Meyer B, Berger T, Caspar F, Beevers CG, Andersson G, Weiss M. Effectiveness of a novel integrative online treatment for depression (deprexis): randomized controlled trial. *J Med Internet Res*.

2009;11:e15.

35. Faul F, Erdfelder E, Lang AG, Buchner A. G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behav Res Methods*. 2007;39:175-91.
36. Cohen J. *Statistical power analysis for the behavioral sciences*. 3rd ed. New York, NY: Academic Press; 1988.
37. Richards D, Richardson T. Computer-based psychological treatments for depression: a systematic review and meta-analysis. *Clin Psychol Rev*. 2012;32:329-42.
38. Hoglend P. Exploration of the patient-therapist relationship in psychotherapy. *Am J Psychiatry*. 2014;171:1056-66.
39. Lutz W, Stulz N, Kock K. Patterns of early change and their relationship to outcome and follow-up among patients with major depressive disorders. *J Affect Disord*. 2009;118:60-8.
40. Stulz N, Lutz W, Leach C, Lucock M, Barkham M. Shapes of early change in psychotherapy under routine outpatient conditions. *J Consult Clin Psychol*. 2007;75:864-74.

Figures

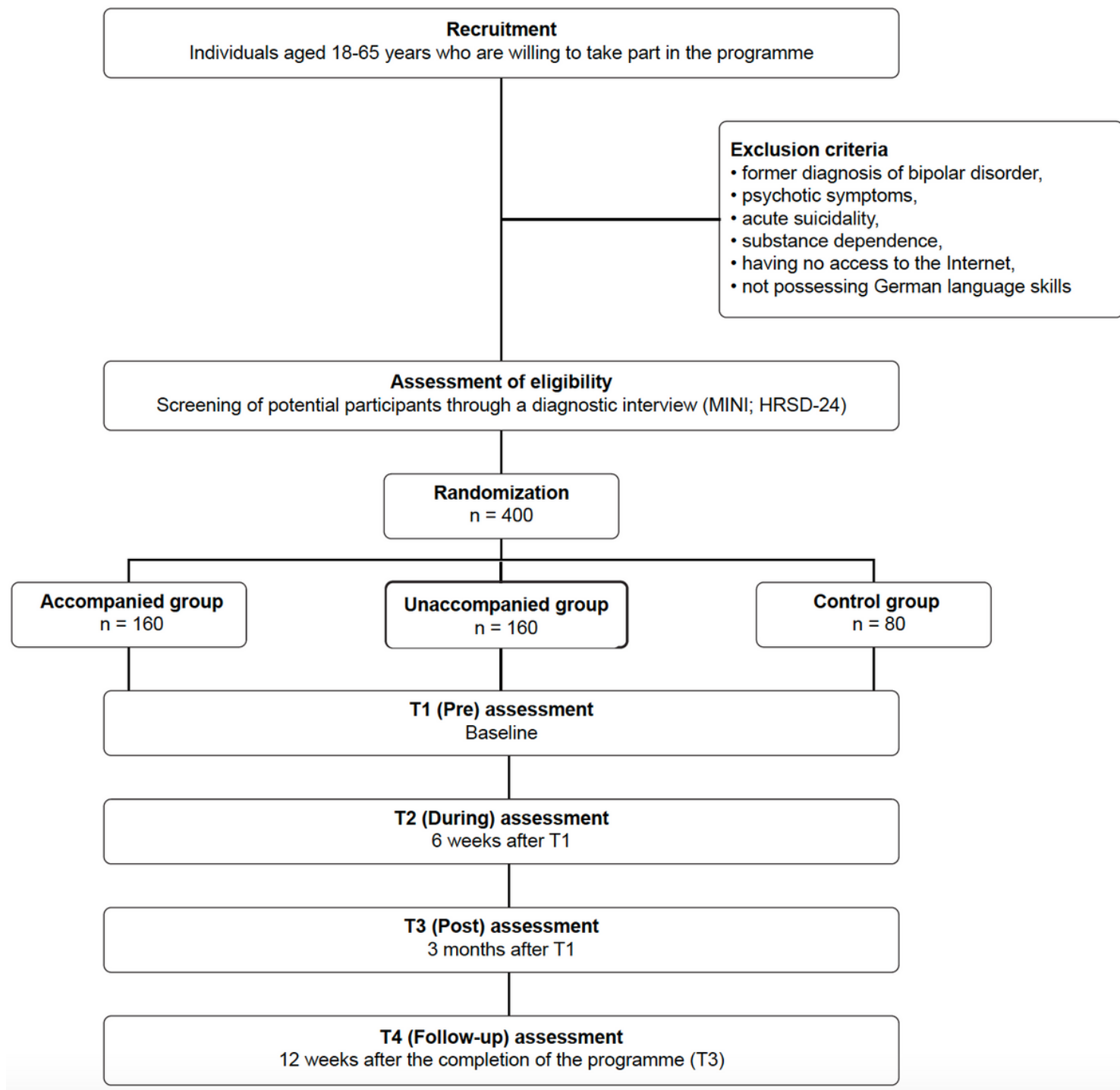


Figure 1

“Selfapy” programme flowchart

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