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Expectation focused and frequency enhanced cognitive behavioral therapy for patients with major depression (EFFECT): A study protocol of a randomized active-control trial

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Abstract

Introduction. The effectiveness of psychotherapy in depression is subject of an ongoing debate. The mechanisms of change are still underexplored. Research tries to find influencing factors fostering the effect of psychotherapy. In that context, the dose-response relationship should receive more attention. Increasing the frequency of one to two sessions per week seems to be a promising start. Moreover, the concept of expectations and its influence in depression can be another auspicious approach. Dysfunctional expectations and the lack of their modification are central in symptom maintenance. Expectation focused

psychological interventions (EFPI) have been investigated, primarily in the field of depression. The aim of this study is to compare cognitive behavioral therapy (CBT) once a week with a more intensified version of CBT (twice a week) in depression as well as to include a third proof-of-principle intervention group receiving a condensed expectation focused CBT.

Methods and Analysis. Participants are recruited through an outpatient clinic in Germany. A current major depressive episode, diagnosed via structured clinical interviews should present as the main diagnosis. The planned randomized-controlled trial will allow comparisons between the following treatment conditions: CBT (1 session/week), condensed CBT (2 sessions/week), and EFPI (2 sessions/week). All treatment arms include a total dose of 24 sessions. Depression severity applies as the outcome variable (Beck Depression Inventory II; BDI-II, Montgomery Asperg Depression Rating Scale; MADRS). A sample size of n=150 is intended.

Ethics and dissemination. The local ethics committee of the Department of Psychology, Philipps-University Marburg approved the study (reference number 2020-68v). The final research article including the study results is intended to be published in international peer-reviewed journals.

Key words. cognitive behavioral therapy (CBT), once vs. twice weekly sessions, expectation focused psychological interventions (EFPI), depression, psychotherapy research

Strengths

- Naturalistic and practice-oriented randomized controlled design for testing the effectiveness of psychotherapy
- the article will provide first results concerning structural conditions allowing first conclusions for possible implications

- First study that includes expectation focused psychological interventions (EFPI) assuming dysfunctional expectations as main mechanisms of symptom persistence and the lack of change

Limitations

- Depression as a highly comorbid disorder, manualized psychotherapy studies may limit the transfer to practice
- For economic reasons, it was opted against a 2 x 2 design, including only three treatment arms: CBT once weekly, CBT twice weekly, EFPI twice weekly

Theoretical background

Major depression, as one form of mood disorders, is one of the most common mental disorders with a lifetime prevalence of 13 % in Europe [1]. In the last decades, research seemed to prove the effectiveness of different treatments in depression [2-5]. However, a meta-analysis reassessing the effects of psychotherapy for adult depression with the aim to control methodological biases in meta-analyses puts the effectiveness into question again [6, 7]. The need to find promising approaches to enhance effectiveness seems obvious. However, treatment research that focuses on theory-based factors might have reached its limits. A long line of research started to focus on common or unspecific factors leading to treatment success. Typical common factors are therapeutic relationship or alliance, treatment expectations, empathy and congruence [8, 9]. Especially the concept of expectations gets more and more attention as an important factor in psychopathology [10].

Furthermore, the consideration of common structural variables was rather neglected. It not only seems important to consider these factors to augment positive treatment outcome, but also for defining an evidence-based professional policy of psychotherapy in healthcare systems. Even in Germany, as one of the few European countries where psychotherapy is paid by health insurance, a length of twelve to sixty one-weekly 50-minute session for cognitive

behavioral therapy is the default [11]. With exception of the duration, the frequency of sessions per week seems to be rather randomly determined due to convenience and a lack of evidence.

In the last years psychotherapy researchers started investigating the dose-response relationship [12-14]. As "dose", different factors can be considered, e.g., total number of sessions, number of sessions per week, or the session duration. Howard and colleagues [15] were one of the first to look at the number of sessions needed to reach symptom recovery by calculating a probit model (dose-response model). After eight sessions, 50% of the patients showed symptom improvement, whereas 75% of the patients improved after 26 sessions. Further evidence confirms the need of approximately 20 sessions to expect a symptom recovery by over the half to two-thirds of the patients [13, 14, 16, 17]. The change pattern seems to be negatively accelerated, as a greater effect per session occurs in earlier sessions, which then decreases in the later sessions [18-20].

A meta regression analysis showed no significant influence of the duration of the therapy, while replacing one session per week by two sessions per week increased the effect by a small to medium effect size [21]. These findings could be supported by an RCT comparing one versus two sessions per week, concluding that twice weekly sessions in clinical practice could improve treatment outcome in depression [12]. A higher session frequency seems to result in a faster recovery, making it a promising variable to improve the efficiency of psychotherapy [22].

Only very few studies dealt with the comparison of intensive and standard treatment regarding the duration of one therapy session. Especially for anxiety disorders, indicating mixed results about the superiority of intensive treatment forms, especially in long term [23-25]. In conclusion, it seems more promising to increase the frequency (i.e., two single sessions weekly) of psychotherapy instead of planning double length sessions.

As mentioned above, the concept of expectation and its role in psychopathology should be better considered. The concept of expectations in psychological research leads back to action and decision making theories [26-28]. A consistent definition is still lacking [29]. Humans learn through a constant prediction updating based on external input [30-32]. Experiences lead to the development of specific expectations towards future events and proper behavior [33, 34]. However, expectations are not only unidirectionally formed by the external input through experiences. They also influence beforehand the experience in future situations, as it is well-observed in the so-called placebo effects [35-37]. Thus, expectations play a central role in psychotherapy, regarding the therapy outcome [38, 39] or the therapeutic relationship [40, 41].

According to the underlying theoretical models [42, 43], the lack of expectation adaptation after expectation violating information is defined as fundamental. This is mainly explained through two mechanisms: the minimization of the importance of expectation-disconfirming evidence and the search for or the production of future expectation-confirming evidence [44]. Based on the ViolEx-model [10, 42], the process of cognitive immunization, i.e., the reappraisal of disconfirming information in order to maintain prior expectations, is demonstrated in first experimental designs, especially in people with depressive symptoms [45-47]. Depressed patients show increased dysfunctional expectations and at the same time a lack in the ability to accommodate these dysfunctional expectations after new expectation-disconfirming experiences [43, 48]. This was already described in the context of learned helplessness as a fundamental explanatory model of depression [49]. Different processes seem to inhibit expectation adaptation by expectation-inconsistent experiences, leading to rigid expectations and thinking [50].

Integrating expectation focused psychological interventions (EFPI) into psychotherapy to directly address immunization processes is the next logical step [51, 52]. Based on the presented theoretical background, mechanisms that lead to rigid thought patterns (e.g.,

immunization or avoidance processes) can be made salient. This entails the possibility to integrate new (positive) experiences in future expectations. Kolb and colleagues [53] emphasize that individuals should make new experiences to learn. It therefore seems crucial to support patients in making new experiences and to facilitate learning processes that challenge problem-specific expectations.

As major depression is one of the most prevalent mental disorders, this study aims to find possible ways to foster psychotherapy by firstly specifying the necessary frequency for an effective psychotherapeutic treatment in depression and, secondly prove the effectiveness of expectation focused cognitive behavioral therapy in depression.

For this study, three concrete hypotheses are formulated:

1. A standard CBT protocol leads to a higher reduction in depressive symptoms when applied twice weekly, compared to one session a week.

2. As a pilot, an innovative CBT program focusing and providing expectation-focused interventions (EFPI), also applied twice weekly, should lead to a significant reduction in depressive symptoms over time.

3. The EFPI condition approaching expectations as core mechanisms with two sessions a week will show a superiority over the CBT condition twice weekly.

Methods

The local ethics committee of the Department of Psychology, Philipps-University Marburg approved the study (reference number 2020-68v), which was pre-registered under drks.de (German Clinical Trials Register DRKS00023203).

Patient and Public involvement

Patients were primarily involved in the preparation of the study manuals (especially EFPI). Patients in treatment due to depression were giving input and feedback about the different interventions chosen and / or developed by the study investigators. We intend to provide the main results of the study to interested participants.

Population

Participants will mainly be recruited at the psychotherapy outpatient clinic (Psychotherapie Ambulanz Marburg; PAM) of the Philipps-University Marburg. If a current major depression episode is suspected in the initial interview, the patient will be informed about this study. The following inclusion criteria should be met: participants should be at least 18 years, have a sufficient knowledge of German, have a major depression episode according to DSM-IV as the main diagnosis and should fulfill a total BDI-II score over 13 (mild depression). Patients were excluded if they have had a psychotic disorder (now or in the past) or are addicted to substances such as alcohol, drugs, medication. Moreover, if psychopharmacological drugs are prescribed, the intake dose must be stable over the last 4 weeks and not be changed during the treatment and first follow-up phase. In accordance to Bruijniks and colleagues [12], a total sample size of 150 participants is planned (with a supposed small effect size of 0.25 and a alpha of 0.05, a power of 0.92 can be reached with a sample size of 150 by considering repeated measures, within-between interaction).

Study Design and procedure

Patients who are interested in study participation undergo a short telephone interview on the inclusion criteria and are then invited to a diagnostic appointment. The inclusion and exclusion criteria are then thoroughly checked. If the inclusion criteria are met, the study procedure is explained, and an informed consent (see Appendix A1) form is signed. The patients are randomly assigned by one study leader following simple randomization (computerized random numbers) to one of the three groups and assigned to a study therapist. A coding list is maintained by one of the study leader during the ongoing study and is going to be deleted after study completion. The first six sessions are used as a run-in phase for assessments and establishing a therapeutic relationship, as well as the collection of further questionnaires and clinical history to confirm the diagnosis. The run-in phase is six weeks, frequency and content are independent of the treatment condition. Subsequently, the twenty-

four therapy sessions start. Depending on the treatment condition, one respectively two therapy sessions take place per week. For those having appointments twice a week, the last four therapy sessions are spread over 10 weeks (see figure 1). Moreover, a diagnostic interview is conducted after the twentieth and twenty-fourth session. After the end of twenty-four sessions, a first follow-up diagnostic interview takes place after three months of the last (24^{th}) session. In that time, no therapeutic sessions are allowed, and antidepressant medication should be kept stable. Afterwards, further sessions can be conducted if necessary (e.g., for the treatment of secondary diagnosis or uncovered symptoms). A second follow-up diagnostic interview is planned two years after the end of study treatment (see figure 2).

Diagnostic assessments

Psychotherapists in post gradual training conduct the diagnostic interviews and are blinded to the condition. In the case of unblinding, the following diagnostic assessments will be conducted by another, still blinded, diagnostician. The diagnostic interviews are supervised by licensed therapists and supervisors. The first diagnostic interview consists of the study information, the informed consent, the implementation of the German version of the structural clinical interview for DSM-IV [54], and the BDI-II [55] by the client and the MADRS [56] by the diagnostician. In the following diagnostic interviews, only the major depression section of the SCID-IV is conducted to rate the MADRS. These external assessments by the diagnosticians take place at baseline, after the twentieth and twenty-fourth therapy session, as well as after three month and two years after therapy completion. All self-rating questionnaires are answered after the sessions on a tablet using SoScisurvey [57].

Type of Treatments

All therapists conducting the study therapy are psychotherapists in training and receive regular supervision (after every forth therapy session). The first cohort of study therapists receives a workshop on the different treatment conditions and the study flow. The workshop

is recorded to easily train new study therapists when needed. All therapists will be trained to do both kind of treatments.

In all, the study includes three treatment samples. First, the treatment-as-usual (TAU) group consists of one CBT session per week (TAU CBT). The second group receives a more condensed CBT version with two CBT sessions per week during the main parts of treatment (CBT condensed). The third group also receives two sessions per week, but the CBT approach is based on expectation focused psychological interventions (EFPI condensed). For the second and third condition, the last four sessions are spread over 10 weeks. After twenty-four sessions, the treatment according to study protocol is completed. As mentioned above, continuation of therapy, is possible after the 3-months follow up if necessary. After two years, a second follow-up measurement will take place to estimate long-term therapy effectiveness.

CBT manual. The CBT manual includes a description of the attitude and behavior of a CBT therapist [58]. The manual is modularized and enables personalization by a selection of up to three out of seven possible, problem-specific CBT modules. The first session deals with psychoeducation on depression. Typical symptoms are collected, and an individual case concept is developed including cognitions, feelings, and behavior. The seven modules include inactivity, cognitive work, relaxation, problem solving, emotion regulation, interpersonal difficulties, and self-esteem. Every module starts with a psychoeducational part linking the patient's own problems with the respective module. Further on, worksheets are presented, which were designed according to suggestions of different CBT-manuals for depression [58-60]. The manual closes in session 24 with relapse prevention.

EFPI manual. In the first six sessions, psychoeducation on the link between expectations and depressive symptoms is delivered. Participants should acquire knowledge about expectations as a specific form of thoughts and how expectations regulate human behavior. The advantages (e.g., fast behavior planning) and disadvantages (e.g., reduces

flexibility) of forming expectations are elaborated. The negative consequences of very rigid expectations are discussed. Through self-observation, personal expectations should be made salient. Explicit expectations on the therapy are addressed. Further on, the link between the patient's biography and the origin of their expectations is drawn. An introduction to behavioral experiments as an important tool to test, break, and change dysfunctional expectations is introduced. Cognitive immunization, as a mechanism of reappraising new information to fit into prior expectations and to prevent expectation change despite contradicting experiences, is explained, and introduced based on the patient's personal examples.

After the psychoeducation phase, behavioral experiments are to be planned and conducted with the aim to test dysfunctional expectations considering the patient's immunization strategies. The manual gives examples on behavioral experiments for different depression specific problems (parallel to modules CBT manual). The therapists are supposed to be very flexible in planning behavioral experiments. It is obligatory to carry out at least one behavior experiment between (or within) each session. For relapse prevention, which is addressed in the 24th session, the prior expectations towards therapy are reviewed, learned strategies are collected, and future plans are elaborated.

Assessments

The timepoints of the different assessments used are summarized in table 1.

Demographic variables. Different variables about the participants will be assessed including gender, age, nationality, mother language, education, and occupation.

Primary outcome. To analyze symptom reduction the self-rating scale Beck Depression Inventory II – German Version [55] is used, as well as the expert rating scale Montgomery Asperg Depression Rating Scale MADRS [56]. The MADRS is a ten-item questionnaire for clinicians to rate depressive symptoms on a seven-rating scale while the patient is interviewed by them. Again, a higher sum-score indicates a more severe depression.

A sum score of 0 to 7 means no depression, 7 to 19 indicates a mild depression, 20 to 34 moderate and a sum score over 34 is noted as severe depression.

Secondary outcome. To assess the general symptom burden, the revised German version of the symptom checklist SCL-90 [61] is used. With ninety items, different symptoms are assessed that are grouped into following subscales: somatization, compulsivity, depression, insecurity in social contact, anxiety, aggression, phobia, paranoia, psychoticism. Dysfunctional expectations are assessed with the depressive expectations scale DES [48]. Using 25 items, dysfunctional expectations about social rejection, social support, mood regulation, and ability to perform are assessed. The therapeutic alliance is assessed with the helping alliance questionnaire HAQ [62] integrating two eleven-item questionnaires, one for the patient and one for the clinician asking about the therapeutic relationship. To assess specific expectations towards the treatment, the six-item credibility/expectancy questionnaire CEQ [63] is used.

Table 1. *Overview of the study instruments and the survey timepoints.*

Domain	Instrument	Inclusion diagnostic	Probatory (6 sessions)	T 10	T20	T24	FU 1 after 3 moths	FU 2 after 2 years
Demographic and amnestic information	demographics	x	x					
Depressive symptom severity	BDI-II	x	x	x	x	x	x	x
	MADRS	x			x	x	x	x
	SCID-IV	x						
General symptoms	SCL-90		x	x	x	x	x	x
Therapeutic alliance	HAQ		x	x	x	x	x	x
Expectations and immunization	CEQ		x	x	x	x	x	x
	DES		x	x	x	x	x	x
	IMS		x	x	x	x	x	x
Analogue scales about homework, engagement, actual impairment, actual expectation towards treatment, negative expectations	self-formulated items	x	x	x	x	x	x	x

Note. BDI-II Beck Depression Inventiory, MADRS Montgomery Asperg Rating Scale, SCID-IV structural clinical interview for DSM-IV, SCL-90 Symptom Checklist, HAQ Helping Alliance Questionnaire, CEQ Credibility and Expectancy Questionnaire, DES Depressive Expectation Scale, IMS Immunization Scale; Analogue scales are assessed for every therapeutic session as momentary assessment

Moreover, to measure cognitive immunization the Immunization scale (IMS) including 23 items is used [64]. To test for acceptance, drop-out rates will be compared between the three conditions. Treatment adherence will be controlled by analyses of the recorded sessions by study independent raters.

Every-session monitoring.

In every therapy session, patients are supposed to answer questions regarding homework completion, engagement ("From the last session to this one, my commitment to therapy was": extreme low to extreme high 0-100), depressive symptoms [65], and own expectations [63] to monitor treatment progress. The questions were adapted by the authors for the progress diagnostics.

Statistical Analysis

The complete anonymous dataset including all important subject data is regularly supplemented during the ongoing study (a.o., demogrpahics, protocol violations, completed questionnaires). Intention-to-treat analyses are planned. At first, missing values and dropouts will be analyzed regarding their distribution. Due to clustered data, a certain estimated amount of missing data, as well as a time variable as a continuous variable, mixed models for repeated measures shall be calculated [66]. In accordance to the study of Bruijniks and colleagues [12], multilevel analyses will be calculated to analyze the frequency condition (once vs. twice weekly), as well as the intervention form (CBT vs. EFPI) on depressive symptoms (BDI-II scores and MADRS scores) over the treatment time first including the interaction terms time x frequency and time x treatment. To analyze if the frequency effect will differ between therapy forms, a second model with the interaction term time x frequency x intervention will be calculated. Significance levels will be set at $p < 0.05$. The same models will be used for secondary outcomes. Further on, effect sizes (Cohen´s d) will be calculated.

Discussion

This study will analyze the influence of session frequency, as well as the influence of specific expectations on psychotherapy effectiveness. Strengths and limitations are discussed in the following.

Limitations. To standardize the treatment groups, a CBT manual as well as an EFPI manual was written. Depression is known as a highly comorbid disorder [67, 68], the manual might not be flexible enough. To counteract the limitation, the CBT manual was modularized, so the therapists have the possibility to choose personalized modules. For the EFPI manual, only the psychoeducation sessions are completely predefined, whereas the chosen topics in therapy are mutually defined by patients and therapists. The only specification by the protocol is that at least one behavioral experiment must be conducted in / between every session. In that sense, the authors support the increasing idea of tailoring psychotherapy to the person [69]. As the EFPI treatment is still in its pilot phase as well as to avoid underpowered samples, we opted against a 2 x 2 design, and for the neglect of an EFPI once weekly condition.

Strengths. This study has a well-structured randomized controlled design, whereas the execution of the study is very practice oriented and naturalistic. The study directly addresses the structure of care, allowing people with mental health problems to be helped quickly. The study therapists are all in their psychotherapist training, whereby differences in psychotherapeutic experience and other therapeutic differences are tried to be kept low, as it is done by the randomization. They are all supervised by CBT- or EFPI-supervisors. Moreover, the innovative expectation focused therapy manual can directly be compared to a well-established and evidence-based psychotherapy form. We will also evaluate one treatment arm focusing on the maintenance and change of problem-specific expectations. Such a focus promises powerful efficacy, because its close relation to brain functions, central treatment mechanisms, and mechanisms of change.

Expected benefit. Important implications on therapy session frequency can be drawn to create optimal learning conditions. We address the practical execution of psychotherapy and may suggest a certain guideline concerning the frequency of psychotherapy sessions per week. If we confirm existing literature, psychotherapy should be implemented in a shorter time with a two-sessions-per-week-dose. This would especially be a benefit in reducing waiting time for psychotherapy. In Germany the waiting time amounted 2018 twenty weeks [70], whereas during the COVID pandemic the time is estimated to increase constantly [71].

Further on, this study will be the first one delivering information on the feasibility of an expectation focused therapy manual in depression. Well-established questionnaires measuring dysfunctional expectations as well as immunization are not available yet, whereas first attempts to operationalize the concepts are already done [48].Further research should foster valid instruments assessing and validating the constructs of the ViolEx-model. The EFPI intervention promises to be a theory-driven intervention, based on the ViolEx model considering disorder-unspecific common factors, with a clear treatment focus that can result in very powerful effects [72].

Contributorship statement

Anne-Catherine Ewen: Conceptualization, Writing – Original draft, Project administration

Gaby Bleichhardt: Conceptualization, Writing – Review & Editing, therapist supervision

Winfried Rief: Conceptualization, Supervision, Writing – Review & Editing **Pia von Blanckenburg:** Conceptualization, Writing – Review & Editing **Katrin Wambach:** Conceptualization, Writing – Review & Editing, therapist supervision **Marcel Wilhelm:** Conceptualization, Writing – Review & Editing, Supervision, Project administration

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Figures

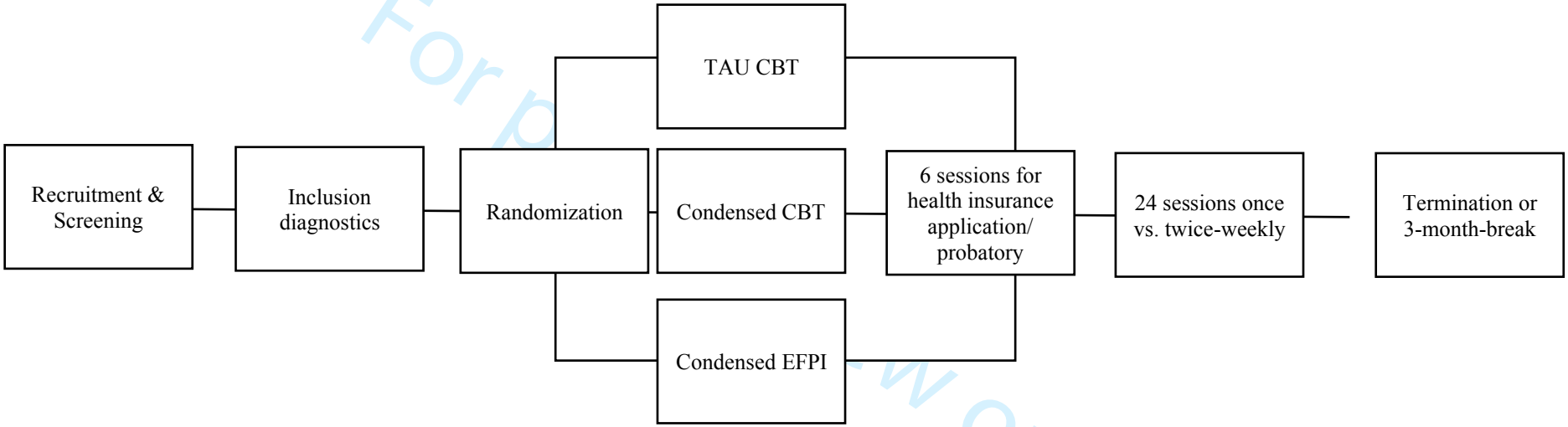
Figure 1. *Study Procedure.*

Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic intervention

Figure 2. *Study Design*

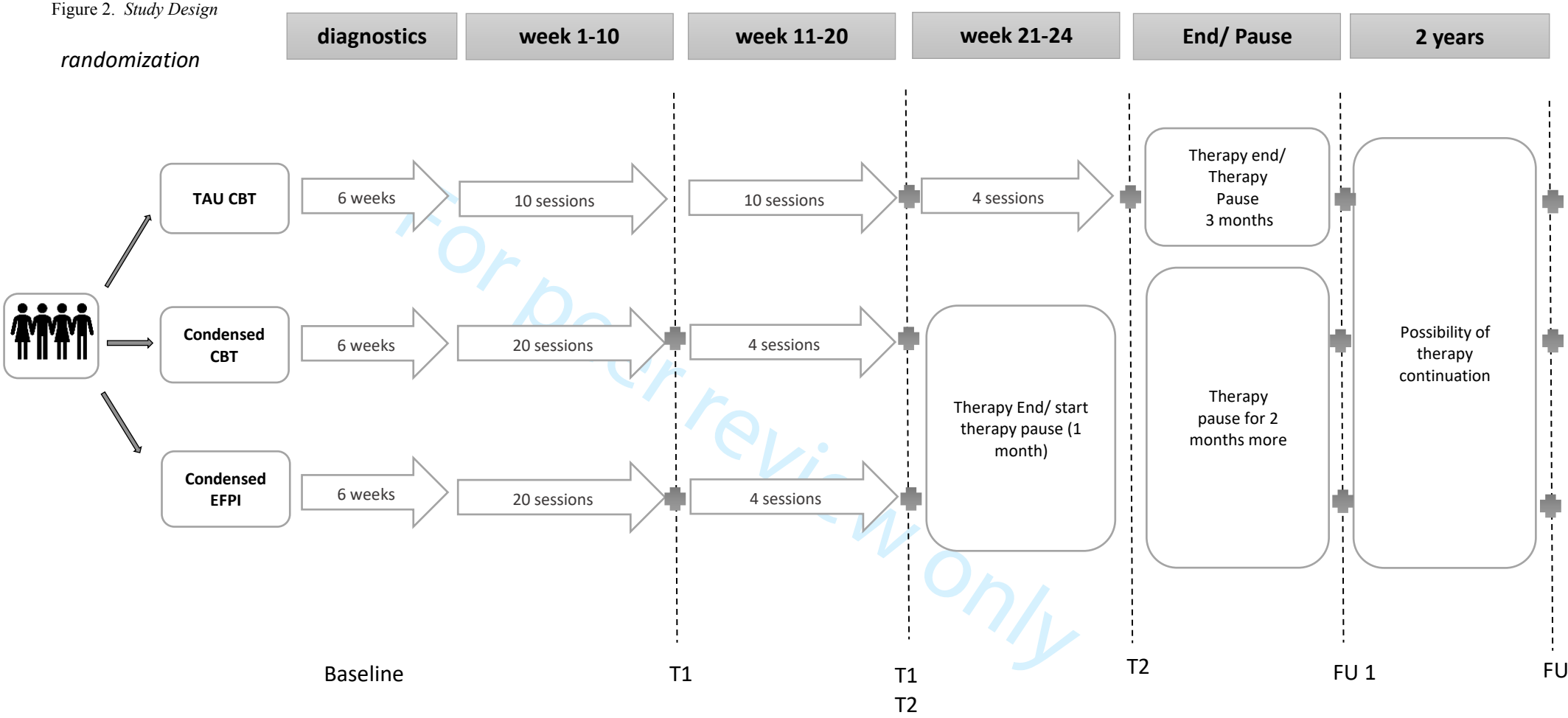
Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic treatment, T measurement timepoint, FU Follow-up

Figure 1. *Study Procedure.*



Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic intervention

Figure 2. *Study Design*



Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic treatment, T measurement timepoint, FU Follow-up

Appendix

A 1.

Study information and informed consent (Original in German)

„Expectation Focused and Frequency Enhanced Cognitive-behavioral Therapy (EFFECT)"

Informationsschreiben für Studienteilnehmerinnen und Studienteilnehmer

Liebe Studieninteressierte, Lieber Studieninteressierter,

wir freuen uns über Ihr Interesse an unserem Forschungsprojekt EFFECT, in dem wir einerseits kognitiv-verhaltenstherapeutische Behandlungen mit einmal wöchentlichen und zweimal wöchentlichen Therapiesitzungen vergleichen wollen und andererseits die Wirksamkeit von zwei kognitiv-verhaltenstherapeutischen Behandlungsmethoden vergleichen.

Das Therapieangebot ist Mittelpunkt eines Forschungsprojekts (Leitung: Prof. Dr. Winfried Rief, Professur für klinische Psychologie und Psychotherapie, Philipps-Universität Marburg).

Worum geht es in dieser Studie?

Wir wissen aus verschiedenen Studien, dass Psychotherapie bei psychischen Erkrankungen wie Depressionen wirksam ist und zu einer Reduktion der depressiven Symptome führt. Wir wissen aber auch, dass es viele Faktoren gibt, die einen Einfluss auf den Erfolg der Behandlung haben können. Dazu gehört einerseits die Anzahl der Therapie-Sitzungen pro Woche. In dieser Studie wollen wir untersuchen, ob die Anzahl der Therapie-Sitzungen pro Woche (1 vs. 2) die Wirksamkeit der kognitiven Verhaltenstherapie zur Behandlung von Depressionen verbessern kann.

Weiterhin wissen wir aus der Forschung, dass Erwartungen unser Verhalten und unser Befinden beeinflussen können und sogar einen Einfluss auf den Therapie-Erfolg haben können. Deswegen geht es in dieser Studie auch darum neue und innovative erwartungsfokussierte Therapietechniken im Rahmen einer kognitiven Verhaltenstherapie zu untersuchen.

Was ist kognitive Verhaltenstherapie (KVT) genau?

Die kognitive Verhaltenstherapie ist eine Form der Psychotherapie, welche sich vorrangig auf das Hier und Jetzt bezieht. Weiter geht die KVT davon aus, dass das Verhalten, die Gedanken und die Gefühle eng zusammenhängen, wobei die aktive Veränderung des Verhaltens und den Gedanken, die Gefühle dauerhaft verändern kann. Das Verhalten das ein Mensch zeigt, ist meist ein Ergebnis von bewussten und nichtbewussten Lernprozessen. Im Rahmen der Psychotherapie wird das Verhalten gemeinsam analysiert, um es später bewusst zu ändern. Kognitionen beziehen sich auf unser Denken. Dabei wird geschaut, welche Gedanken zur psychischen Störung beitragen, um diese mit verschiedenen Techniken zu ändern oder zu ersetzen. Weiter werden eigene Stärken und Fähigkeiten benutzt, um diesen Veränderungsprozess zu unterstützen.

Was ist der Nutzen?

Mit Ihrer Teilnahme leisten Sie einen wichtigen Beitrag für die Wissenschaft und erlauben uns einerseits depressive Störungen und andererseits die Wirkungsweisen von psychotherapeutischen Behandlungen

besser zu verstehen, um weiterhin die Behandlungsmöglichkeiten stetig anpassen und verbessern zu können.

Wer kann an dieser Studie teilnehmen?

Alle Personen über 18 Jahren können sich für die Studie anmelden. Gute Deutschkenntnisse werden vorausgesetzt. Nach der Durchführung eines Interviews und dem Ausfüllen der Fragebögen wird überprüft, ob alle Kriterien für den Einschluss in die Studie erfüllt sind. Dies wird mit Ihnen in einem Rückmeldegespräch besprochen und das weitere Vorgehen wird geplant. In diesem Gespräch werden Sie dann auch Rückmeldung über die Diagnostik bekommen.

Wie sieht der Ablauf der Studie aus?

Nach dem ersten Anmeldungsgespräch in der Ambulanz und nach Ihrer Entscheidung, an der Studie teilnehmen zu wollen, werden Sie zufällig einer von drei Behandlungsbedingungen und einem/einer Therapeuten/Therapeutin zugeteilt. Danach folgen 7 Sitzungen, welche zur ausführlichen Diagnostik dienen (je nach Bedingung zweimal wöchentlich oder einmal wöchentlich). In diesen 7 Sitzungen wird der/die Therapeut/ Therapeutin mithilfe von Fragebögen und Interviews eine Diagnose nach den Kriterien der internationalen Diagnostiksysteme (ICD-10 und DSM-IV) stellen und einen Antrag an die Krankenkasse für die Kostenübernahme der Psychotherapie stellen.

Nach diesen 7 Sitzungen beginnt die Behandlung. Diese beträgt dann 24 Therapie-Sitzungen. Je nach Zufallszuteilung werden die Sitzungen zweimal pro Woche oder einmal pro Woche stattfinden. Damit wir die Erfolge der Therapie beurteilen können, werden Sie verschiedene Fragebögen zu verschiedenen Zeitpunkten ausfüllen. Diese Fragebögen beziehen sich vor allem auf Ihre aktuellen Belastungen, Ihre Stimmung, Ihre Erwartungen und Ihre subjektiven Beurteilung des Therapie-Erfolges und der Beziehung zum/zur Therapeuten/ Therapeutin. Die Messzeitpunkte, bei denen Sie diese Fragebögen ausfüllen, werden einmal am Anfang der Therapie, einmal in der 10. Therapiewoche, nach der 20., nach der 24. Therapiewoche und nach 3 Monaten nach dem Therapie-Ende, sowie nach 2 Jahren stattfinden.

Wie wird man der Art und Form der Behandlung zugeordnet?

Die Therapieformen (KVT und KVT mit erwartungsfokussierten Interventionen (EFPI); Sitzungen 1 vs. 2 mal pro Woche) entsprechen dem neuesten Stand der Wissenschaft. Alle Behandlungen werden von speziell ausgebildeten Therapeutinnen und Therapeuten durchgeführt. Die Zuordnung zu einer Bedingung erfolgt per Zufall, d.h. jeder Teilnehmer/ jede Teilnehmerin wird per Zufallsentscheidung und nicht aufgrund bestimmter Eigenschaften einer der drei Therapieformen zugeordnet.

Was sind mögliche Nebenwirkungen, Belastungen und Risiken?

Bislang gibt es aus der Forschung nur sehr wenige Belege für Nebenwirkungen in der Psychotherapie. In der geplanten Studie sind keine negativen Effekte auf Sie zu erwarten. Die Therapie an sich kann anstrengend und ermüdend sein und kann manchmal negative Gefühlen auslösen. Um diese negativen Effekte kontinuierlich erfassen zu können, wird der Therapeut/ die Therapeutin Sie in jeder Stunde nach Ihrem aktuellen Befinden fragen, um mögliche negative Gefühle aufgreifen und bearbeiten zu können. Alle Therapeutinnen und Therapeuten stehen unter Supervision (Aufsicht) von ausgebildeten und sehr erfahrenen Psychotherapeutinnen. Falls die Behandlung nicht zum gewünschten Erfolg führt, können optionale Behandlungsmöglichkeiten mit der Psychotherapeutin/ dem Psychotherapeuten diskutiert werden.

Abbruch und Widerrufsrecht

Die Teilnahme an der Studie ist freiwillig. Sie können jederzeit und ohne Angabe eines Grundes Ihre Einverständniserklärung zurückziehen und aus der Studie aussteigen. Der Rücktritt ist mit keinerlei Kosten oder Nachteilen verbunden. Es wird weiterhin die Möglichkeit geben, eine ambulante Therapie

an der Hochschulambulanz zu machen. Auf Wunsch können außerdem alle Daten, die im Rahmen der Studie erhoben wurden, gelöscht werden.

Datenschutz

Personenbezogene Daten während Therapie-Durchlauf: Die Therapeutinnen und Therapeuten sind verpflichtet alle personenbezogenen Dokumentationen in einer Therapie-Akte in abschließbaren Schränken aufzubewahren. Für die Sicherstellung der Qualität der Behandlung sind u. U. Video-Aufnahmen von Therapiesitzungen notwendig, welche auf einer passwortgeschützten Festplatte in abgeschlossenen Schränken aufbewahrt werden. Diese Videos werden nach Abschluss der Studie und nach der Beurteilung der Therapie-Durchführung zur Qualitätssicherung während der Therapie gelöscht. Therapie-Akten werden nach Therapie-Ende gemäß den Aufbewahrungsfristen der DSGVO 10 Jahre aufbewahrt.

Kodierliste: Die Erhebung, Speicherung und Verarbeitung der persönlichen Daten (demographische Daten wie Alter und Geschlecht, Ergebnisse der Fragebögen und Interviews) erfolgen pseudonomisiert unter Verwendung eines Codes, ohne Angaben ihres Namens. Es exisitert eine Kodierliste auf Papier (im Institut Psychologie, AG klinische Psychologie und Psychotherapie Philipps-Universität Marburg), welche Ihren Namen mit Ihrem zugeordneten Code verbindet. Diese Liste ist nur den V ersuchsleiter/innen (Studientherapeutinnen und Studientherapeuten) und dem Projektleiter zugänglich. Diese Liste wird in einem verschließbaren Schrank aufbewahrt und nach Abschluss der Studie vernichtet. Ihre Daten sind ab dem Zeitpunkt komplett anonymisiert. Es ist dann nicht mehr möglich, den Code Ihrem Namen zuzuordnen. Solange diese Liste exisitert, können Sie jederzeit die Löschung Ihrer Daten beantragen. Ab der Löschung der Liste ist dies nicht mehr möglich.

Studien- und Datenqualität: Zur Qualitätssicherung der Durchführung der Studie werden Studien-unabhängige Prüferinnen und Prüfer, vorausgesetzt Ihrer schriftlichen Einverständniserklärung zur Schweigepflichtsentbindung, Einblick in personenbezogene Daten (v.a. Therapie-Sitzungen) nehmen, um die Durchführung der Therapie zu überprüfen. Weiterhin können mit Ihrer Unterschrift zur Schweigepflichtsentbindung Supervisorinnen und Supervisoren Einblick in personenbezogene Daten nehmen (Videos, Akten), um die Studientherapeutinnen und Studientherapeuten bestmöglichst bei der Therapie-Durchführung zu unterstützen.

Diese Befragung wird mit Hilfe des Portals https://www.soscisurvey.de durchgeführt. Hierbei werden folgende zentrale Sicherheitsaspekte berücksichtigt: keine Speicherung der IP-Adressen in den Logfiles, es findet eine SSL-Verschlüsselung statt und der Server befindet sich in München, Deutschland. Die detaillierten Hinweise zum Datenschutz können unter folgendem Link nachgelesen werden: https://www.soscisurvey.de/index.php?page=privacy.

Ansprechpartner

Diese Studie wird unter Leitung von Herrn Prof. Dr. Winfried Rief, Arbeitsgruppe Klinische Psychologie und Psychotherapie, Fachbereich Psychologie der Philipps-Universität Marburg, Gutenbergstraße 18, 35037 Marburg durchgeführt.

Ansprechpartner für die Studie sind:

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- Herr Dr. Marcel Wilhelm (Telefon: 06421 28 23617, E-Mail: marcel.wilhelm@staff.uni-marburg.de
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- Frau Dr. Katrin Wambach (Telefon: 06421 28 23681, E-Mail: wambach@staff.uni-marburg.de) Der verantwortliche Studienleiter,
  Herr Prof. Dr. Winfried Rief (Telefon: 06421 28 23641, E-Mail: riefw@staff.uni-marburg.de), kann ebenfalls bei weiteren Fragen kontaktiert werden.

Wenn Sie alle Informationen gelesen und verstanden haben, die Gelegenheit für Rückfragen hatten und diese angemessen beantwortet wurden, bitten wir Sie Ihre Teilnahme an der Studie mit der Unterschrift auf der beiliegenden Einverständniserklärung zu bestätigen.

Herzlichen Dank!

Ihr EFFECT-Studien-Team

E-Mail: effect04@uni-marburg.de **Tel**:06421-22834

Einverständniserklärung zur Studienteilnahme

Mir wurde von Frau/ Herrn_____ ausführlich erklärt, worum es in der EFFECT-Studie geht.

Ich, _____ (Name der Teilnehmerin / des Teilnehmers), habe ein Informationsblatt mit näheren Informationen zum Ziel und Ablauf der oben genannten Studie erhalten („Studieninformation“). Ich habe alle Informationen vollständig gelesen und verstanden. Sofern ich Fragen zu der Studie hatte, wurden sie vollständig und zu meiner Zufriedenheit beantwortet.

Ich erkläre mich mit den im Informationsblatt („Studieninformation für Teilnehmerinnen und Teilnehmer“) beschriebenen Erklärungen und Studienbedingungen und mit der beschriebenen Handhabung der erhobenen Daten einverstanden. Ich wurde darüber informiert, dass meine Teilnahme freiwillig ist. Ich weiß, dass ich jederzeit und ohne Angabe von Gründen meine Zustimmung zur Teilnahme widerrufen kann, ohne dass mir dadurch irgendwelche Nachteile entstehen. Wenn die Notwendigkeit besteht, kann ich weiter an einer ambulanten Psychotherapie an der Psychotherapie-Ambulanz Marburg/ Institut für Psychotherapie-Ausbildung Marburg (PAM/ IPAM) teilnehmen. Mir ist bekannt, wie und von wem meine persönlichen Daten im Rahmen der Studie verarbeitet werden. Wenn ich das möchte, weiß ich, dass ich die Löschung meiner Daten einfordern kann.

Eine Ausfertigung der Teilnehmerinformationen und Einwilligungserklärung habe ich erhalten. Ich hatte genügend Zeit eine Entscheidung zu treffen und erkläre mich hiermit bereit, an der oben genannten Studie teilzunehmen.

_____ Name des Teilnehmers/ der Teilnehmerin

_____Name des Diagnostikers/ der Diagnostikerin

_____Ort, Datum und Unterschrift des Teilnehmers/ der Teilnehmerin

_____ Ort, Datum und Unterschrift des Diagnostikers/ der Diagnostikerin

SPIRIT
STANDARD PROTOCOL ITEMS: RECOMMENDATIONS FOR INTERVENTIONAL TRIALS

SPIRIT 2013 Checklist: Recommended items to address in a clinical trial protocol and related documents*

Section/item	Item No	Description	
Administrative information			
Title	1	Descriptive title identifying the study design, population, interventions, and, if applicable, trial acronym	YES
Trial registration	2a	Trial identifier and registry name. If not yet registered, name of intended registry	YES
	2b	All items from the World Health Organization Trial Registration Data Set	YES
Protocol version	3	Date and version identifier	YES
Funding	4	Sources and types of financial, material, and other support	
Roles and responsibilities	5a	Names, affiliations, and roles of protocol contributors	/
	5b	Name and contact information for the trial sponsor	/
	5c	Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they will have ultimate authority over any of these activities	/ (no funder)
	5d	Composition, roles, and responsibilities of the coordinating centre, steering committee, endpoint adjudication committee, data management team, and other individuals or groups overseeing the trial, if applicable (see Item 21a for data monitoring committee)	/
Introduction			
Background and rationale	6a	Description of research question and justification for undertaking the trial, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention	YES
	6b	Explanation for choice of comparators	YES
Objectives	7	Specific objectives or hypotheses	YES
Trial design	8	Description of trial design including type of trial (eg, parallel group, crossover, factorial, single group), allocation ratio, and framework (eg, superiority, equivalence, noninferiority, exploratory)	YES

Methods: Participants, interventions, and outcomes			
Study setting	9	Description of study settings (eg, community clinic, academic hospital) and list of countries where data will be collected. Reference to where list of study sites can be obtained	YES
Eligibility criteria	10	Inclusion and exclusion criteria for participants. If applicable, eligibility criteria for study centres and individuals who will perform the interventions (eg, surgeons, psychotherapists)	YES
Interventions	11a	Interventions for each group with sufficient detail to allow replication, including how and when they will be administered	YES
	11b	Criteria for discontinuing or modifying allocated interventions for a given trial participant (eg, drug dose change in response to harms, participant request, or improving/worsening disease)	YES
	11c	Strategies to improve adherence to intervention protocols, and any procedures for monitoring adherence (eg, drug tablet return, laboratory tests)	YES
	11d	Relevant concomitant care and interventions that are permitted or prohibited during the trial	YES
Outcomes	12	Primary, secondary, and other outcomes, including the specific measurement variable (eg, systolic blood pressure), analysis metric (eg, change from baseline, final value, time to event), method of aggregation (eg, median, proportion), and time point for each outcome. Explanation of the clinical relevance of chosen efficacy and harm outcomes is strongly recommended	YES
Participant timeline	13	Time schedule of enrolment, interventions (including any run-ins and washouts), assessments, and visits for participants. A schematic diagram is highly recommended (see Figure)	YES
Sample size	14	Estimated number of participants needed to achieve study objectives and how it was determined, including clinical and statistical assumptions supporting any sample size calculations	YES
Recruitment	15	Strategies for achieving adequate participant enrolment to reach target sample size	YES
Methods: Assignment of interventions (for controlled trials)			
Allocation:			

Sequence generation	16a	Method of generating the allocation sequence (eg, computer-generated random numbers), and list of any factors for stratification. To reduce predictability of a random sequence, details of any planned restriction (eg, blocking) should be provided in a separate document that is unavailable to those who enrol participants or assign interventions	YES
Allocation concealment mechanism	16b	Mechanism of implementing the allocation sequence (eg, central telephone; sequentially numbered, opaque, sealed envelopes), describing any steps to conceal the sequence until interventions are assigned	YES
Implementation	16c	Who will generate the allocation sequence, who will enrol participants, and who will assign participants to interventions	YES
Blinding (masking)	17a	Who will be blinded after assignment to interventions (eg, trial participants, care providers, outcome assessors, data analysts), and how	YES
	17b	If blinded, circumstances under which unblinding is permissible, and procedure for revealing a participant's allocated intervention during the trial	YES
Methods: Data collection, management, and analysis			
Data collection methods	18a	Plans for assessment and collection of outcome, baseline, and other trial data, including any related processes to promote data quality (eg, duplicate measurements, training of assessors) and a description of study instruments (eg, questionnaires, laboratory tests) along with their reliability and validity, if known. Reference to where data collection forms can be found, if not in the protocol	YES
	18b	Plans to promote participant retention and complete follow-up, including list of any outcome data to be collected for participants who discontinue or deviate from intervention protocols	YES
Data management	19	Plans for data entry, coding, security, and storage, including any related processes to promote data quality (eg, double data entry; range checks for data values). Reference to where details of data management procedures can be found, if not in the protocol	YES
Statistical methods	20a	Statistical methods for analysing primary and secondary outcomes. Reference to where other details of the statistical analysis plan can be found, if not in the protocol	YES
	20b	Methods for any additional analyses (eg, subgroup and adjusted analyses)	YES
	20c	Definition of analysis population relating to protocol non-adherence (eg, as randomised analysis), and any statistical methods to handle missing data (eg, multiple imputation)	YES
Methods: Monitoring			

Data monitoring	21a	Composition of data monitoring committee (DMC); summary of its role and reporting structure; statement of whether it is independent from the sponsor and competing interests; and reference to where further details about its charter can be found, if not in the protocol. Alternatively, an explanation of why a DMC is not needed	/
	21b	Description of any interim analyses and stopping guidelines, including who will have access to these interim results and make the final decision to terminate the trial	YES
Harms	22	Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct	YES
Auditing	23	Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor	YES
Ethics and dissemination			
Research ethics approval	24	Plans for seeking research ethics committee/institutional review board (REC/IRB) approval	YES
Protocol amendments	25	Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC/IRBs, trial participants, trial registries, journals, regulators)	YES
Consent or assent	26a	Who will obtain informed consent or assent from potential trial participants or authorised surrogates, and how (see Item 32)	YES
	26b	Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies, if applicable	/
Confidentiality	27	How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial	YES
Declaration of interests	28	Financial and other competing interests for principal investigators for the overall trial and each study site	/
Access to data	29	Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators	YES
Ancillary and post-trial care	30	Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation	/

Dissemination policy	31a	Plans for investigators and sponsor to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions	
	31b	Authorship eligibility guidelines and any intended use of professional writers	YES
	31c	Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code	/ (In Preregistration)
Appendices			
Informed consent materials	32	Model consent form and other related documentation given to participants and authorised surrogates	YES
Biological specimens	33	Plans for collection, laboratory evaluation, and storage of biological specimens for genetic or molecular analysis in the current trial and for future use in ancillary studies, if applicable	/

*It is strongly recommended that this checklist be read in conjunction with the SPIRIT 2013 Explanation & Elaboration for important clarification on the items. Amendments to the protocol should be tracked and dated. The SPIRIT checklist is copyrighted by the SPIRIT Group under the Creative Commons "Attribution-NonCommercial-NoDerivs 3.0 Unported" license.

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Expectation focused and frequency enhanced cognitive behavioral therapy for patients with major depression (EFFECT): A study protocol of a randomized active-control trial

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Expectation focused and frequency enhanced cognitive behavioral therapy for patients with major depression (EFFECT): A study protocol of a randomized active-control trial

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Abstract

Introduction. The effectiveness of psychotherapy in depression is subject of an ongoing debate. The mechanisms of change are still underexplored. Research tries to find influencing factors fostering the effect of psychotherapy. In that context, the dose-response relationship should receive more attention. Increasing the frequency from one to two sessions per week seems to be a promising start. Moreover, the concept of expectations and its influence in depression can be another auspicious approach. Dysfunctional expectations and the lack of their modification are central in symptom maintenance. Expectation focused psychological interventions (EFPI) have been investigated, primarily in the field of depression. The aim of this study is to compare cognitive behavioral therapy (CBT) once a week with an intensified version of CBT (twice a week) in depression as well as to include a third proof-of-principle intervention group receiving a condensed expectation focused CBT.

Methods and Analysis. Participants are recruited through an outpatient clinic in Germany. A current major depressive episode, diagnosed via structured clinical interviews should present as the main diagnosis. The planned randomized-controlled trial will allow comparisons between the following treatment conditions: CBT (1 session/week), condensed CBT (2 sessions/week), and EFPI (2 sessions/week). All treatment arms include a total dose of 24 sessions. Depression severity applies as the outcome variable (Beck Depression

Inventory II; BDI-II, Montgomery Asberg Depression Rating Scale; MADRS). A sample size of n=150 is intended.

Ethics and dissemination. The local ethics committee of the Department of Psychology, Philipps-University Marburg approved the study (reference number 2020-68v). The final research article including the study results is intended to be published in international peer-reviewed journals.

Key words. cognitive behavioral therapy (CBT), once vs. twice weekly sessions, expectation focused psychological interventions (EFPI), depression, psychotherapy research

Strengths

- Practice-oriented randomized controlled design to test the effectiveness of psychotherapy
- the results will add important information to the research body of structural conditions for psychotherapy, allowing further conclusions on how often psychotherapy should be offered
- First study that includes expectation focused psychological interventions (EFPI) assuming dysfunctional expectations as main mechanisms of symptom persistence and the lack of change

Limitations

- As this is a manualized psychotherapy study designed for depression, the transfer to other disorders may be limited
- For economic reasons, it was opted against a 2 x 2 design, including only three treatment arms: CBT once weekly, CBT twice weekly, EFPI twice weekly

Theoretical background

Major depression, as one form of mood disorders, is one of the most common mental disorders with a lifetime prevalence of 13 % in Europe [1]. In the last decades, research seemed to prove the effectiveness of different treatments for depression [2-5]. However, a meta-analysis reassessing the effects of psychotherapy for adult depression with the aim to control methodological biases in meta-analyses puts the effectiveness into question again [6, 7]. The need to find promising approaches to enhance effectiveness seems obvious. However, treatment research that compares the different psychotherapy procedures with different theoretical backgrounds aiming to find the best techniques might have reached its limits [8]. A long line of research started to focus on common or unspecific factors leading to treatment success. Typical common factors are therapeutic relationship or alliance, treatment expectations, empathy and congruence [9, 10]. Especially the concept of expectations is receiving more and more attention as an important factor in psychopathology [11].

Furthermore, the consideration of common structural variables such as the number of sessions, duration of sessions, or environmental factors was rather neglected. It not only seems important to consider these factors to augment positive treatment outcome, but also to define an evidence-based professional policy of psychotherapy in healthcare systems. Even in Germany, as one of the few European countries where psychotherapy is paid by health insurance, a length of twelve to sixty one-weekly 50-minute session for cognitive behavioral therapy is the default [12]. With exception of the duration, the frequency of sessions per week seems to be rather randomly determined due to convenience and a lack of evidence.

In the last years psychotherapy researchers started investigating the dose-response relationship [13-15]. As “dose”, different factors can be considered, e.g., total number of sessions, number of sessions per week, or the session duration. Howard and colleagues [16] were one of the first to look at the number of sessions needed to reach symptom recovery by calculating a probit model (dose-response model). After eight sessions, 50% of the patients showed symptom improvement, whereas 75% of the patients improved after 26 sessions.

Further evidence confirms the need of approximately 20 sessions to expect a symptom recovery by over half to two-thirds of the patients [14, 15, 17, 18]. The change pattern seems to be negatively accelerated, as a greater effect per session occurs in earlier sessions, which then decreases in the later sessions [19-21].

A meta regression analysis showed no significant influence of the duration of the therapy, while replacing one session per week by two sessions per week increased the effect by a small to medium effect size [22]. Some studies already showed a positive effect of higher session frequency leading to faster recovery [23-25]. Erekson and colleagues [25] for example showed in a naturalistic setting that a counseling session every week compared to a decreased frequency not only leads to a faster change, but also to a higher likelihood of achieving recovery and achieving it sooner. Moreover, these findings were also supported by an RCT comparing one versus two sessions per week, concluding that two weekly sessions in clinical practice could improve treatment outcome in depression [13]. A higher session frequency seems to result in a faster recovery, making it a promising variable to improve the efficiency of psychotherapy [26].

Only very few studies dealt with the comparison of intensive and standard treatment regarding the duration of one therapy session. Especially for anxiety disorders, studies are indicating mixed results about the superiority of intensive treatment forms, especially in the long term [27-29]. In conclusion, it seems more promising to increase the frequency (i.e., two single sessions weekly) of psychotherapy instead of planning double length sessions.

As mentioned above, the concept of expectation and its role in psychopathology should be better considered. The concept of expectations in psychological research leads back to action and decision making theories [30-32]. A consistent definition is still lacking [33]. Humans learn through constant prediction updating based on external input [34-36]. Experiences lead to the development of specific expectations towards future events and proper behavior [37, 38]. However, expectations are not only unidirectionally formed by the

external input through experiences. They also influence the experience in future situations beforehand, as it is well-observed in the so-called placebo effects [39-41]. Some studies analyzed the relationship between initial expectation change and treatment outcome [42-44]. As already mentioned above, initial positive outcome expectations are associated to a better treatment outcome, whereas inducing positive outcome expectations or changing negative ones change significantly the treatment outcome in a positive way. Thus, expectations play a central role in psychotherapy, regarding the therapy outcome [45, 46] or the therapeutic relationship [47, 48].

According to the underlying theoretical models [49-51], the lack of expectation adaptation after expectation violating information is defined as fundamental. This is mainly explained through two mechanisms: the minimization of the importance of expectation-disconfirming evidence and the search for or the production of future expectation-confirming evidence [52]. The ViolEx-model [11, 49, 53], adapted by Panitz and colleagues in 2021 [51], describes the different processes of expectation adaptation or persistence and transfers it to psychopathology. The model hypothesizes that general expectations are formed by the social environment, individual differences (e.g., personality traits), and past experiences. These general expectations form situation-specific expectations. Furthermore, different anticipatory reactions are described to highlight different processes influencing the situational outcome (e.g., attention steering to expectation-confirming cues rather than to expectation-disconfirming cues). A differentiation between internal (i.e., preparation to the situation) and external reactions (i.e., assimilation, or experimentation, approach, or avoidance) are made. Assimilation is described as the process of the attempt to confirm the expectation whereby experimentation is defined as the process of wanting to openly collect valid data to check the proper expectation. Transferring this to psychopathology, assimilation can include avoidant behavior as is well known in anxiety disorders [54, 55]. Experimentation is a process that is desired in psychotherapy to adapt dysfunctional or unhelpful thoughts [56, 57]. If the

expectation is violated through an unexpected experience, the initial expectation should be adapted or at least questioned (i.e., accommodation). This process is often blocked, especially in patients with depression [58]. The ViolEx raises a concept called *cognitive immunization*, which can lead to expectation persistence. The process of cognitive immunization, i.e., the reappraisal of disconfirming information in order to maintain prior expectations, is demonstrated in first experimental designs, especially in people with depressive symptoms [58-60]. Depressed patients show increased dysfunctional expectations and at the same time a lack of ability to accommodate these dysfunctional expectations after new expectation-disconfirming experiences [50, 61]. This was already described in the context of learned helplessness as a fundamental explanatory model of depression [62]. Different processes seem to inhibit expectation adaptation by expectation-inconsistent experiences, leading to rigid expectations and thinking [63].

Integrating expectation focused psychological interventions (EFPI) into psychotherapy to directly address processes leading to expectation persistence is the next logical step [64, 65]. Based on the presented theoretical background, mechanisms that lead to rigid thought patterns (e.g., anticipatory reactions or immunization processes) should be made salient, whereby a destabilization or change of psychopathological expectations and an experimenting behavior should be fostered. This entails the possibility to integrate new (positive) experiences in future expectations. Kolb and colleagues [66] emphasize that individuals should make new experiences to learn. It therefore seems crucial to support patients in making new experiences and to facilitate learning processes that challenge problem-specific expectations. Moreover, making information processing mechanisms (i.e., not only assimilation but also immunization) salient in psychotherapy allows the patients to not only change unhelpful expectations, but also learn to actively influence their processing mechanisms. According to Rief and colleagues [53], effective therapy needs to include successful expectation violations to change dysfunctional expectations that are related to the

development and/ or maintenance of psychopathology (as for example negative expectations in depression [61, 67, 68]). Based on this rational, therapy resistance may be counteracted by directly addressing immunization processes that are hypothesized to play a crucial role [53, 68]. All these processes described by the ViolEx model are usually not directly addressed in psychotherapy. As major depression is one of the most prevalent mental disorders, this study aims to find possible ways to foster psychotherapy by firstly specifying the necessary frequency for an effective psychotherapeutic treatment in depression and, secondly prove the effectiveness of expectation focused cognitive behavioral therapy in depression.

For this study, three concrete hypotheses are formulated:

1. A standard CBT protocol leads to a higher reduction in depressive symptoms when applied twice weekly, compared to one session a week.

2. As a pilot, an innovative CBT program focusing and providing expectation-focused interventions (EFPI), also applied twice weekly, should lead to a significant reduction in depressive symptoms over time.

3. The EFPI condition approaching expectations as core mechanisms with two sessions a week will show a superiority over the CBT condition twice weekly.

4. Dysfunctional expectations will have a higher impact on the therapy outcome in the EFPI condition than in the CBT condition.

Methods

Ethics and dissemination

The local ethics committee of the Department of Psychology, Philipps-University Marburg approved the study (reference number 2020-68v), which was pre-registered under drks.de (German Clinical Trials Register DRKS00023203). The final research article including the study results is intended to be published in an international peer-reviewed journal with the possibility of open access.

Patient and Public involvement

Patients were primarily involved in the preparation of the study manuals (especially EFPI). Patients in treatment due to depression were giving input and feedback about the different interventions chosen and / or developed by the study investigators. We intend to provide the main results of the study to interested participants.

Population

Participant recruitment is planned between October 2020 and December 2023. Participants will mainly be recruited at the psychotherapy outpatient clinic (Psychotherapie Ambulanz Marburg; PAM) of the Philipps-University Marburg. If a current major depression episode is suspected in the initial interview, the patient will be informed about this study. The following inclusion criteria should be met: participants should be at least 18 years, have a sufficient knowledge of German, have a major depression episode according to DSM-IV as the main diagnosis and should fulfill a total BDI-II score over 13 (mild depression). Patients were excluded if they have had a psychotic disorder (now or in the past) or are addicted to substances such as alcohol, drugs, medication. Moreover, if psychopharmacological drugs are prescribed, the intake dose must be stable over the last 4 weeks and not be changed during the treatment and first follow-up phase. In accordance to Bruijniks and colleagues [13], a total sample size of 150 participants is planned (with a supposed small effect size of 0.25 and a alpha of 0.05, a power of 0.92 can be reached with a sample size of 150 by considering repeated measures, within-between interaction).

Study Design and procedure

Patients who are interested in study participation undergo a short telephone interview on the inclusion criteria and are then invited to a diagnostic appointment. The inclusion and exclusion criteria are then thoroughly checked. If the inclusion criteria are met, the study procedure is explained, and an informed consent (see Appendix A1) form is signed. The patients are randomly assigned by one study leader following simple randomization (computerized random numbers) to one of the three groups and assigned to a study therapist.

A coding list is maintained by one of the study leaders during the ongoing study and is going to be deleted after study completion. The first six sessions are used as a run-in phase for assessments and establishing a therapeutic relationship, as well as the collection of further questionnaires and clinical history to confirm the diagnosis. The run-in phase is six weeks, frequency and content are independent of the treatment condition. They consist out of anamnesis (e.g., with the help of lifeline) and information gathering to draw a micro and macro functional analysis [69]. There are no interventions allowed during the run-in phase. Subsequently, the twenty-four therapy sessions start. Twenty-four sessions are chosen to match the German health care plan of a short-term therapy and is in line with the literature presented in the introduction about the number of sessions needed to expect recovery. Depending on the treatment condition, one respectively two therapy sessions take place per week. For those having appointments twice a week, the last four therapy sessions are spread over 10 weeks (see figure 1). Moreover, a diagnostic interview is conducted after the twentieth and twenty-fourth session. After the end of twenty-four sessions, a first follow-up diagnostic interview takes place after three months of the last (24^{th}) session. In that time, no therapeutic sessions are allowed, and antidepressant medication should be kept stable. Afterwards, further sessions can be conducted if necessary (e.g., for the treatment of secondary diagnosis or uncovered symptoms). A second follow-up diagnostic interview is planned two years after the end of study treatment (see figure 2).

Diagnostic assessments

Psychotherapists in post gradual training conduct the diagnostic interviews and are blinded to the condition. In the case of unblinding, the following diagnostic assessments will be conducted by another, still blinded, diagnostician. The diagnostic interviews are supervised by licensed therapists and supervisors. The first diagnostic interview consists of the study information, the informed consent, the implementation of the German version of the structural clinical interview for DSM-IV [70], and the BDI-II [71] by the client and the MADRS [72] by

the diagnostician. In the following diagnostic interviews, only the major depression section of the SCID-IV is conducted to rate the MADRS. These external assessments by the diagnosticians take place at baseline, after the twentieth and twenty-fourth therapy session, as well as after three months and two years after therapy completion. All self-rating questionnaires are answered after the sessions on a tablet using SoScisurvey [73].

Type of Treatments

All therapists conducting the study therapy are psychotherapists in training and receive regular supervision (after every forth therapy session). The first cohort of study therapists receives a workshop on the different treatment conditions and the study flow. The workshop is recorded to easily train new study therapists when needed. All therapists will receive a standardized training and are scheduled to deliver treatment in all three conditions at least once to balance out therapist effects.

In total, the study includes three treatment samples (see appendix A2). First, the treatment-as-usual (TAU) group consists of one CBT session per week (TAU CBT). The second group receives a more condensed CBT version with two CBT sessions per week during the main parts of treatment (CBT condensed). The third group also receives two sessions per week, but the CBT approach is based on expectation focused psychological interventions (EFPI condensed). For the second and third condition, the last four sessions are spread over 10 weeks. After twenty-four sessions, the treatment according to study protocol is completed. As mentioned above, continuation of therapy, is possible after the 3-months follow up if necessary. After two years, a second follow-up measurement will take place to estimate long-term therapy effectiveness.

CBT manual. The manual is based on the most common CBT manuals, which are already implemented in practice [74-76]. It firstly includes a description of the attitude and behavior of a CBT therapist [77]. The manual is modularized and enables personalization by a selection of up to three out of seven possible, problem-specific CBT modules. The first

session deals with psychoeducation on depression. Typical symptoms are collected, and an individual case concept is developed including cognitions, feelings, and behavior. The seven modules include inactivity, cognitive work, relaxation, problem solving, emotion regulation, interpersonal difficulties, and self-esteem. Every module starts with a psychoeducational part linking the patient's own problems with the respective module. Further on, worksheets are presented, which were designed according to suggestions of different CBT-manuals for depression [77-79]. The manual closes in session 24 with relapse prevention.

EFPI manual. Even though the EFPI manual is based on cognitive-behavioral interventions, it was decided to test the manual for feasibility first. Therefore, two therapists in training executed the manualized therapy with two voluntary patients and constantly consulted with the supervisor and the patient. The manual was slightly updated based on the comments of the therapists, supervisor, and patients.

In the first six sessions, psychoeducation on the link between expectations and depressive symptoms is delivered. Participants should acquire knowledge about expectations as a specific form of thoughts and how expectations regulate human behavior. The advantages (e.g., fast behavior planning) and disadvantages (e.g., reduced flexibility) of forming expectations are elaborated. The negative consequences of very rigid expectations are discussed. Through self-observation, personal expectations should be made salient. Explicit expectations concerning the therapy are addressed. Further on, the link between the patient's biography and the origin of their expectations is drawn. An introduction to behavioral experiments as an important tool to test, break, and change dysfunctional expectations is introduced. Cognitive immunization, as a mechanism of reappraising new information to fit into prior expectations and to prevent expectation change despite contradicting experiences, is explained, and introduced based on the patient's personal examples.

After the psychoeducation phase, behavioral experiments are to be planned and conducted with the aim to test dysfunctional expectations considering the patient's

immunization strategies. In contrast to the possible performed behavioral experiments in the CBT condition, the focus in the EFPI condition lies on the understanding of the information processing mechanisms and, consequently, taking control over these by the possibility to actively influence them. The behavioral experiments in the EFPI condition are a new information processing strategy learned by the patients, rather than a strategy to change the content of expectations. The manual gives examples on behavioral experiments for different depression specific problems (parallel to modules CBT manual). The therapists are supposed to be very flexible in planning behavioral experiments. It is obligatory to carry out at least one behavior experiment between (or within) each session. For relapse prevention, which is addressed in the 24th session, the prior expectations towards therapy are reviewed, learned strategies are collected, and future plans are elaborated.

Assessments

The timepoints of the different assessments used are summarized in table 1.

Demographic variables. Different variables about the participants will be assessed including gender, age, nationality, mother language, education, and occupation.

Primary outcome. To analyze symptom reduction the self-rating scale Beck Depression Inventory II – German Version [71] is used, as well as the expert rating scale Montgomery Asberg Depression Rating Scale MADRS [72]. The MADRS is a ten-item questionnaire for clinicians to rate depressive symptoms on a seven-rating scale while the patient is interviewed by them. Again, a higher sum-score indicates a more severe depression. A sum score of 0 to 7 means no depression, 7 to 19 indicates a mild depression, 20 to 34 moderate and a sum score over 34 is noted as severe depression.

Secondary outcome. Dysfunctional expectations are assessed with the depressive expectations scale DES [61]. To assess the general symptom burden, the revised German version of the symptom checklist SCL-90 [80] is used. With ninety items, different symptoms are assessed that are grouped into following subscales: somatization, compulsivity,

depression, insecurity in social contact, anxiety, aggression, phobia, paranoia, psychoticism. Using 25 items, dysfunctional expectations about social rejection, social support, mood regulation, and ability to perform are assessed. The therapeutic alliance is assessed with the helping alliance questionnaire HAQ [81] integrating two eleven-item questionnaires, one for the patient and one for the clinician asking about the therapeutic relationship. To assess specific expectations towards the treatment, the six-item credibility/expectancy questionnaire CEQ [82] is used.

Table 1. *Overview of the study instruments and the survey timepoints.*

Domain	Instrument	Inclusion diagnostic	Probatory (6 sessions)	T 10	T20	T24	FU 1 after 3 moths	FU 2 after 2 years
Demographic and amnestic information	demographics	x	x					
Depressive symptom severity	BDI-II	x	x	x	x	x	x	x
	MADRS	x			x	x	x	x
	SCID-IV	x						
General symptoms	SCL-90		x	x	x	x	x	x
Therapeutic alliance	HAQ		x	x	x	x	x	x
Expectations and immunization	CEQ		x	x	x	x	x	x
	DES		x	x	x	x	x	x
Analogue scales about homework, engagement, actual impairment, actual expectation towards treatment, negative expectations	self-formulated items	x	x	x	x	x	x	x

Note. BDI-II Beck Depression Inventiory, MADRS Montgomery Asperg Rating Scale, SCID-IV structural clinical interview for DSM-IV, SCL-90 Symptom Checklist, HAQ Helping Alliance Questionnaire, CEQ Credibility and Expectancy Questionnaire, DES Depressive Expectation Scale, IMS Immunization Scale; Analogue scales are assessed for every therapeutic session as momentary assessment

sTo test for acceptance, drop-out rates will be compared between the three conditions. Treatment adherence will be controlled by analyses of the recorded sessions by study independent raters.

Every-session monitoring.

In every therapy session, patients are supposed to answer questions regarding homework completion, engagement ("From the last session to this one, my commitment to therapy was": extremely low to extremely high 0-100), depressive symptoms [83], and their own expectations [82] to monitor treatment progress. The questions were adapted by the authors for the progress diagnostics.

Statistical Analysis

The complete anonymous dataset including all important subject data is regularly supplemented during the ongoing study (a.o., demographics, protocol violations, completed questionnaires). Intention-to-treat analyses are planned. At first, missing values and dropouts will be analyzed regarding their distribution. Due to clustered data as well as a certain estimated amount of missing data and a continuous time variable, mixed models for repeated measures shall be calculated [84]. In accordance with the study of Bruijniks and colleagues [13], multilevel analyses will be calculated to analyze the frequency condition (once vs. twice weekly), as well as the intervention form (CBT vs. EFPI) on depressive symptoms (BDI-II scores and MADRS scores) over the treatment time first including the interaction terms time x frequency and time x treatment. To analyze if the frequency effect will differ between therapy forms, a second model with the interaction term time x frequency x intervention will be calculated. Significance levels will be set at $p < 0.05$. The same models will be used for secondary outcomes and moderator analyses. Further on, effect sizes (Cohen´s *d*) will be calculated.

Discussion

This study will analyze the influence of session frequency, as well as the influence of specific expectations on psychotherapy effectiveness. Strengths and limitations are discussed in the following.

Limitations. To standardize the treatment groups, a CBT manual as well as an EFPI manual were written. Depression is known as a highly comorbid disorder [85, 86], the manual might not be flexible enough. To counteract the limitation, the CBT manual was modularized, so the therapists have the possibility to choose personalized modules. For the EFPI manual, only the psychoeducation sessions are completely predefined, whereas the chosen topics in therapy are mutually defined by patients and therapists. The only specification by the protocol is that at least one behavioral experiment must be conducted in / between every session. In that sense, the authors support the increasing idea of tailoring psychotherapy to the person [87]. As the EFPI treatment is still in its pilot phase and as to avoid underpowered samples, we opted against a 2 x 2 design, and for the neglect of an EFPI once weekly condition.

Strengths. This study has a well-structured randomized controlled design, whereas the execution of the study is very practice oriented and naturalistic. The study directly addresses the structure of care, allowing people with mental health problems to be helped quickly. The study therapists are all in their psychotherapist training, whereby differences in psychotherapeutic experience and other therapeutic differences are tried to be kept low, as it is done by the randomization. They are all supervised by CBT- or EFPI-supervisors. Moreover, the innovative expectation focused therapy manual can be compared directly to a well-established and evidence-based psychotherapy form. We will also evaluate one treatment arm focusing on the maintenance and change of problem-specific expectations. Such a focus promises powerful efficacy, because of its close relation to brain functions, central treatment mechanisms, and mechanisms of change.

Expected benefit. Important implications for therapy session frequency can be drawn to create optimal learning conditions. We address the practical execution of psychotherapy

and may suggest a certain guideline concerning the frequency of psychotherapy sessions per week. If we confirm existing literature, psychotherapy should be implemented in a shorter time with a two-sessions-per-week-dose. This would especially contributeto reduced waiting time for psychotherapy. In Germany, the waiting time amounted to twenty weeks in 2018 [88], whereas during the COVID pandemic the time is estimated to increase constantly [89].

Further on, this study will be the first one delivering information on the feasibility of an expectation focused therapy manual in depression. Well-established questionnaires measuring dysfunctional expectations as well as immunization are not available yet, whereas first attempts to operationalize the concepts have been made [61].Further research should foster valid instruments assessing and validating the constructs of the ViolEx-model. The EFPI intervention promises to be a theory-driven intervention, based on the ViolEx model considering disorder-unspecific common factors, with a clear treatment focus that can result in very powerful effects [42].

Contributorship statement

Anne-Catherine Ewen: Conceptualization, Writing – Original draft, Project administration

Gaby Bleichhardt: Conceptualization, Writing – Review & Editing, therapist supervision

Winfried Rief: Conceptualization, Supervision, Writing – Review & Editing **Pia von Blanckenburg:** Conceptualization, Writing – Review & Editing **Katrin Wambach:** Conceptualization, Writing – Review & Editing, therapist supervision **Marcel Wilhelm:** Conceptualization, Writing – Review & Editing, Supervision, Project administration

Competing interests: No conflict of interest to report.

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Data Availability Statement: Upon reasonable request, data will be made available by the authors.

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Figures

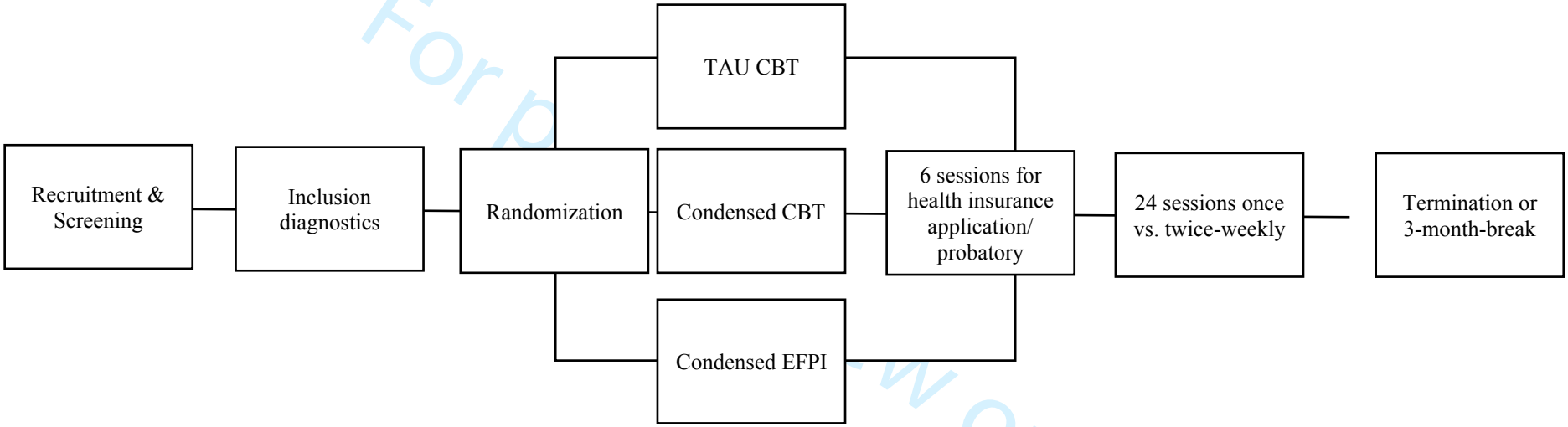
Figure 1. *Study Procedure.*

Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic intervention

Figure 2. *Study Design*

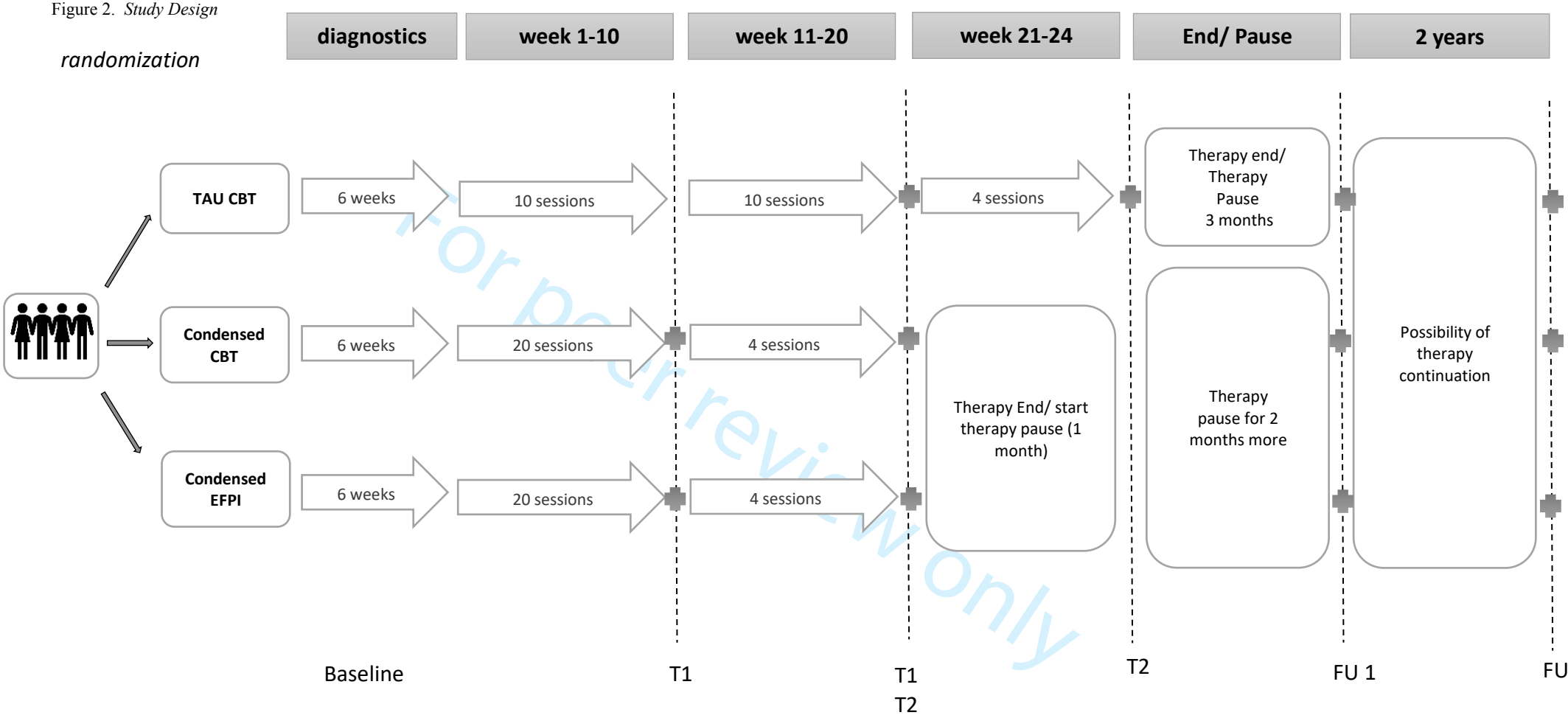
Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic treatment, T measurement timepoint, FU Follow-up

Figure 1. *Study Procedure.*



Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic intervention

Figure 2. *Study Design*



Note. Abbreviations: TAU treatment as usual, CBT cognitive behavioral therapy, EFPI expectation focused psychotherapeutic treatment, T measurement timepoint, FU Follow-up

Appendix

A 1.

Study information and informed consent (Original in German)

„Expectation Focused and Frequency Enhanced Cognitive-behavioral Therapy (EFFECT)"

Informationsschreiben für Studienteilnehmerinnen und Studienteilnehmer

Liebe Studieninteressierte, Lieber Studieninteressierter,

wir freuen uns über Ihr Interesse an unserem Forschungsprojekt EFFECT, in dem wir einerseits kognitiv-verhaltenstherapeutische Behandlungen mit einmal wöchentlichen und zweimal wöchentlichen Therapiesitzungen vergleichen wollen und andererseits die Wirksamkeit von zwei kognitiv-verhaltenstherapeutischen Behandlungsmethoden vergleichen.

Das Therapieangebot ist Mittelpunkt eines Forschungsprojekts (Leitung: Prof. Dr. Winfried Rief, Professur für klinische Psychologie und Psychotherapie, Philipps-Universität Marburg).

Worum geht es in dieser Studie?

Wir wissen aus verschiedenen Studien, dass Psychotherapie bei psychischen Erkrankungen wie Depressionen wirksam ist und zu einer Reduktion der depressiven Symptome führt. Wir wissen aber auch, dass es viele Faktoren gibt, die einen Einfluss auf den Erfolg der Behandlung haben können. Dazu gehört einerseits die Anzahl der Therapie-Sitzungen pro Woche. In dieser Studie wollen wir untersuchen, ob die Anzahl der Therapie-Sitzungen pro Woche (1 vs. 2) die Wirksamkeit der kognitiven Verhaltenstherapie zur Behandlung von Depressionen verbessern kann.

Weiterhin wissen wir aus der Forschung, dass Erwartungen unser Verhalten und unser Befinden beeinflussen können und sogar einen Einfluss auf den Therapie-Erfolg haben können. Deswegen geht es in dieser Studie auch darum neue und innovative erwartungsfokussierte Therapietechniken im Rahmen einer kognitiven Verhaltenstherapie zu untersuchen.

Was ist kognitive Verhaltenstherapie (KVT) genau?

Die kognitive Verhaltenstherapie ist eine Form der Psychotherapie, welche sich vorrangig auf das Hier und Jetzt bezieht. Weiter geht die KVT davon aus, dass das Verhalten, die Gedanken und die Gefühle eng zusammenhängen, wobei die aktive Veränderung des Verhaltens und den Gedanken, die Gefühle dauerhaft verändern kann. Das Verhalten das ein Mensch zeigt, ist meist ein Ergebnis von bewussten und nichtbewussten Lernprozessen. Im Rahmen der Psychotherapie wird das Verhalten gemeinsam analysiert, um es später bewusst zu ändern. Kognitionen beziehen sich auf unser Denken. Dabei wird geschaut, welche Gedanken zur psychischen Störung beitragen, um diese mit verschiedenen Techniken zu ändern oder zu ersetzen. Weiter werden eigene Stärken und Fähigkeiten benutzt, um diesen Veränderungsprozess zu unterstützen.

Was ist der Nutzen?

Mit Ihrer Teilnahme leisten Sie einen wichtigen Beitrag für die Wissenschaft und erlauben uns einerseits depressive Störungen und andererseits die Wirkungsweisen von psychotherapeutischen Behandlungen

besser zu verstehen, um weiterhin die Behandlungsmöglichkeiten stetig anpassen und verbessern zu können.

Wer kann an dieser Studie teilnehmen?

Alle Personen über 18 Jahren können sich für die Studie anmelden. Gute Deutschkenntnisse werden vorausgesetzt. Nach der Durchführung eines Interviews und dem Ausfüllen der Fragebögen wird überprüft, ob alle Kriterien für den Einschluss in die Studie erfüllt sind. Dies wird mit Ihnen in einem Rückmeldegespräch besprochen und das weitere Vorgehen wird geplant. In diesem Gespräch werden Sie dann auch Rückmeldung über die Diagnostik bekommen.

Wie sieht der Ablauf der Studie aus?

Nach dem ersten Anmeldungsgespräch in der Ambulanz und nach Ihrer Entscheidung, an der Studie teilnehmen zu wollen, werden Sie zufällig einer von drei Behandlungsbedingungen und einem/einer Therapeuten/Therapeutin zugeteilt. Danach folgen 7 Sitzungen, welche zur ausführlichen Diagnostik dienen (je nach Bedingung zweimal wöchentlich oder einmal wöchentlich). In diesen 7 Sitzungen wird der/die Therapeut/ Therapeutin mithilfe von Fragebögen und Interviews eine Diagnose nach den Kriterien der internationalen Diagnostiksysteme (ICD-10 und DSM-IV) stellen und einen Antrag an die Krankenkasse für die Kostenübernahme der Psychotherapie stellen.

Nach diesen 7 Sitzungen beginnt die Behandlung. Diese beträgt dann 24 Therapie-Sitzungen. Je nach Zufallszuteilung werden die Sitzungen zweimal pro Woche oder einmal pro Woche stattfinden. Damit wir die Erfolge der Therapie beurteilen können, werden Sie verschiedene Fragebögen zu verschiedenen Zeitpunkten ausfüllen. Diese Fragebögen beziehen sich vor allem auf Ihre aktuellen Belastungen, Ihre Stimmung, Ihre Erwartungen und Ihre subjektiven Beurteilung des Therapie-Erfolges und der Beziehung zum/zur Therapeuten/ Therapeutin. Die Messzeitpunkte, bei denen Sie diese Fragebögen ausfüllen, werden einmal am Anfang der Therapie, einmal in der 10. Therapiewoche, nach der 20., nach der 24. Therapiewoche und nach 3 Monaten nach dem Therapie-Ende, sowie nach 2 Jahren stattfinden.

Wie wird man der Art und Form der Behandlung zugeordnet?

Die Therapieformen (KVT und KVT mit erwartungsfokussierten Interventionen (EFPI); Sitzungen 1 vs. 2 mal pro Woche) entsprechen dem neuesten Stand der Wissenschaft. Alle Behandlungen werden von speziell ausgebildeten Therapeutinnen und Therapeuten durchgeführt. Die Zuordnung zu einer Bedingung erfolgt per Zufall, d.h. jeder Teilnehmer/ jede Teilnehmerin wird per Zufallsentscheidung und nicht aufgrund bestimmter Eigenschaften einer der drei Therapieformen zugeordnet.

Was sind mögliche Nebenwirkungen, Belastungen und Risiken?

Bislang gibt es aus der Forschung nur sehr wenige Belege für Nebenwirkungen in der Psychotherapie. In der geplanten Studie sind keine negativen Effekte auf Sie zu erwarten. Die Therapie an sich kann anstrengend und ermüdend sein und kann manchmal negative Gefühlen auslösen. Um diese negativen Effekte kontinuierlich erfassen zu können, wird der Therapeut/ die Therapeutin Sie in jeder Stunde nach Ihrem aktuellen Befinden fragen, um mögliche negative Gefühle aufgreifen und bearbeiten zu können. Alle Therapeutinnen und Therapeuten stehen unter Supervision (Aufsicht) von ausgebildeten und sehr erfahrenen Psychotherapeutinnen. Falls die Behandlung nicht zum gewünschten Erfolg führt, können optionale Behandlungsmöglichkeiten mit der Psychotherapeutin/ dem Psychotherapeuten diskutiert werden.

Abbruch und Widerrufsrecht

Die Teilnahme an der Studie ist freiwillig. Sie können jederzeit und ohne Angabe eines Grundes Ihre Einverständniserklärung zurückziehen und aus der Studie aussteigen. Der Rücktritt ist mit keinerlei Kosten oder Nachteilen verbunden. Es wird weiterhin die Möglichkeit geben, eine ambulante Therapie

an der Hochschulambulanz zu machen. Auf Wunsch können außerdem alle Daten, die im Rahmen der Studie erhoben wurden, gelöscht werden.

Datenschutz

Personenbezogene Daten während Therapie-Durchlauf: Die Therapeutinnen und Therapeuten sind verpflichtet alle personenbezogenen Dokumentationen in einer Therapie-Akte in abschließbaren Schränken aufzubewahren. Für die Sicherstellung der Qualität der Behandlung sind u. U. Video-Aufnahmen von Therapiesitzungen notwendig, welche auf einer passwortgeschützten Festplatte in abgeschlossenen Schränken aufbewahrt werden. Diese Videos werden nach Abschluss der Studie und nach der Beurteilung der Therapie-Durchführung zur Qualitätssicherung während der Therapie gelöscht. Therapie-Akten werden nach Therapie-Ende gemäß den Aufbewahrungsfristen der DSGVO 10 Jahre aufbewahrt.

Kodierliste: Die Erhebung, Speicherung und Verarbeitung der persönlichen Daten (demographische Daten wie Alter und Geschlecht, Ergebnisse der Fragebögen und Interviews) erfolgen pseudonomisiert unter Verwendung eines Codes, ohne Angaben ihres Namens. Es exisitert eine Kodierliste auf Papier (im Institut Psychologie, AG klinische Psychologie und Psychotherapie Philipps-Universität Marburg), welche Ihren Namen mit Ihrem zugeordneten Code verbindet. Diese Liste ist nur den V ersuchsleiter/innen (Studientherapeutinnen und Studientherapeuten) und dem Projektleiter zugänglich. Diese Liste wird in einem verschließbaren Schrank aufbewahrt und nach Abschluss der Studie vernichtet. Ihre Daten sind ab dem Zeitpunkt komplett anonymisiert. Es ist dann nicht mehr möglich, den Code Ihrem Namen zuzuordnen. Solange diese Liste exisitert, können Sie jederzeit die Löschung Ihrer Daten beantragen. Ab der Löschung der Liste ist dies nicht mehr möglich.

Studien- und Datenqualität: Zur Qualitätssicherung der Durchführung der Studie werden Studien-unabhängige Prüferinnen und Prüfer, vorausgesetzt Ihrer schriftlichen Einverständniserklärung zur Schweigepflichtsentbindung, Einblick in personenbezogene Daten (v.a. Therapie-Sitzungen) nehmen, um die Durchführung der Therapie zu überprüfen. Weiterhin können mit Ihrer Unterschrift zur Schweigepflichtsentbindung Supervisorinnen und Supervisoren Einblick in personenbezogene Daten nehmen (Videos, Akten), um die Studientherapeutinnen und Studientherapeuten bestmöglichst bei der Therapie-Durchführung zu unterstützen.

Diese Befragung wird mit Hilfe des Portals https://www.soscisurvey.de durchgeführt. Hierbei werden folgende zentrale Sicherheitsaspekte berücksichtigt: keine Speicherung der IP-Adressen in den Logfiles, es findet eine SSL-Verschlüsselung statt und der Server befindet sich in München, Deutschland. Die detaillierten Hinweise zum Datenschutz können unter folgendem Link nachgelesen werden: https://www.soscisurvey.de/index.php?page=privacy.

Ansprechpartner

Diese Studie wird unter Leitung von Herrn Prof. Dr. Winfried Rief, Arbeitsgruppe Klinische Psychologie und Psychotherapie, Fachbereich Psychologie der Philipps-Universität Marburg, Gutenbergstraße 18, 35037 Marburg durchgeführt.

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  Herr Prof. Dr. Winfried Rief (Telefon: 06421 28 23641, E-Mail: riefw@staff.uni-marburg.de), kann ebenfalls bei weiteren Fragen kontaktiert werden.

Wenn Sie alle Informationen gelesen und verstanden haben, die Gelegenheit für Rückfragen hatten und diese angemessen beantwortet wurden, bitten wir Sie Ihre Teilnahme an der Studie mit der Unterschrift auf der beiliegenden Einverständniserklärung zu bestätigen.

Herzlichen Dank!

Ihr EFFECT-Studien-Team

E-Mail: effect04@uni-marburg.de **Tel**:06421-22834

Einverständniserklärung zur Studienteilnahme

Mir wurde von Frau/ Herrn_____ ausführlich erklärt, worum es in der EFFECT-Studie geht.

Ich, _____ (Name der Teilnehmerin / des Teilnehmers), habe ein Informationsblatt mit näheren Informationen zum Ziel und Ablauf der oben genannten Studie erhalten („Studieninformation“). Ich habe alle Informationen vollständig gelesen und verstanden. Sofern ich Fragen zu der Studie hatte, wurden sie vollständig und zu meiner Zufriedenheit beantwortet.

Ich erkläre mich mit den im Informationsblatt („Studieninformation für Teilnehmerinnen und Teilnehmer“) beschriebenen Erklärungen und Studienbedingungen und mit der beschriebenen Handhabung der erhobenen Daten einverstanden. Ich wurde darüber informiert, dass meine Teilnahme freiwillig ist. Ich weiß, dass ich jederzeit und ohne Angabe von Gründen meine Zustimmung zur Teilnahme widerrufen kann, ohne dass mir dadurch irgendwelche Nachteile entstehen. Wenn die Notwendigkeit besteht, kann ich weiter an einer ambulanten Psychotherapie an der Psychotherapie-Ambulanz Marburg/ Institut für Psychotherapie-Ausbildung Marburg (PAM/ IPAM) teilnehmen. Mir ist bekannt, wie und von wem meine persönlichen Daten im Rahmen der Studie verarbeitet werden. Wenn ich das möchte, weiß ich, dass ich die Löschung meiner Daten einfordern kann.

Eine Ausfertigung der Teilnehmerinformationen und Einwilligungserklärung habe ich erhalten. Ich hatte genügend Zeit eine Entscheidung zu treffen und erkläre mich hiermit bereit, an der oben genannten Studie teilzunehmen.

_____ Name des Teilnehmers/ der Teilnehmerin

_____Name des Diagnostikers/ der Diagnostikerin

_____Ort, Datum und Unterschrift des Teilnehmers/ der Teilnehmerin

_____ Ort, Datum und Unterschrift des Diagnostikers/ der Diagnostikerin

A 2. Content examples of the CBT- versus the EFPI-manual.

CBT-modules		
Psychoeducation depression	First session	Introduction of cognitive-behavioral therapy explanatory models and development of an individual disorder model
Depending on the main problems, selection of modules for six therapy sessions	Daily problems	Promote problem solving skills, work on current problems
	Emotion regulation	Functionality of emotions, emotions and needs, mindfulness/ acceptance for emotions, emotion analysis
	Relaxation	Psychoeducation stress vs. relaxation, Progressive muscle relaxation
	Inactivity	Depression spiral, week protocols, positive activities
	Self-esteem	Am-me, should-me, wish-me, dysfunctional self-devaluation, sources of self-esteem
	Social competences	Elaborating interpersonal problems, role plays
	Cognitions	Cognitive triad, ABC(DE)-scheme, work on dysfunctional thoughts
Individual buffer	Four sessions	Depending on the needs of the client
End	24th session	relapse prevention and conclusion

EFPI-modules		
Psychoedu-cation of depression in consideration of expectation processes	Five therapy sessions	Introduction to „unhelpful (dysfunctional)“ expectations integrated in cognitive-behavioral explanation models, expectation persistence mechanisms based on the ViolEx-model, behavioral experiments
Flexible application of different topics with the aim of planning one behavioral experiment per therapy session to test own expectations (examples based on the CBT modules)	Social competences	e.g., as part of a behavioral experiment, try out a new social skill at home and evaluate it
	Relaxation	e.g., In the context of a behavioral experiment, taking time for oneself, PMR, mindfulness practice and evaluate it
	Inactivity	e.g., In the context of a behavioral experiment, trying a new activity and evaluate it
	Self-esteem	e.g., In the context of a behavioral experiment, try changed expectations to oneself, formulating positive things about oneself and evaluate it
	Emotion regulation	e.g., In the context of a behavioral experiment, trying a certain emotion regulation strategy and evaluate it
	Daily problems	e.g., In the context of a behavioral experiment, test certain solutions and evaluate it
	Cognitions (expectations)	e.g., In the context of a behavioral experiment, try other thoughts/ expectations and evaluate it
End	Last session	relapse prevention and conclusion

SPIRIT
STANDARD PROTOCOL ITEMS: RECOMMENDATIONS FOR INTERVENTIONAL TRIALS

SPIRIT 2013 Checklist: Recommended items to address in a clinical trial protocol and related documents*

Section/item	Item No	Description	
Administrative information			
Title	1	Descriptive title identifying the study design, population, interventions, and, if applicable, trial acronym	YES
Trial registration	2a	Trial identifier and registry name. If not yet registered, name of intended registry	YES
	2b	All items from the World Health Organization Trial Registration Data Set	YES
Protocol version	3	Date and version identifier	YES
Funding	4	Sources and types of financial, material, and other support	
Roles and responsibilities	5a	Names, affiliations, and roles of protocol contributors	/
	5b	Name and contact information for the trial sponsor	/
	5c	Role of study sponsor and funders, if any, in study design; collection, management, analysis, and interpretation of data; writing of the report; and the decision to submit the report for publication, including whether they will have ultimate authority over any of these activities	/ (no funder)
	5d	Composition, roles, and responsibilities of the coordinating centre, steering committee, endpoint adjudication committee, data management team, and other individuals or groups overseeing the trial, if applicable (see Item 21a for data monitoring committee)	/
Introduction			
Background and rationale	6a	Description of research question and justification for undertaking the trial, including summary of relevant studies (published and unpublished) examining benefits and harms for each intervention	YES
	6b	Explanation for choice of comparators	YES
Objectives	7	Specific objectives or hypotheses	YES
Trial design	8	Description of trial design including type of trial (eg, parallel group, crossover, factorial, single group), allocation ratio, and framework (eg, superiority, equivalence, noninferiority, exploratory)	YES

Methods: Participants, interventions, and outcomes			
Study setting	9	Description of study settings (eg, community clinic, academic hospital) and list of countries where data will be collected. Reference to where list of study sites can be obtained	YES
Eligibility criteria	10	Inclusion and exclusion criteria for participants. If applicable, eligibility criteria for study centres and individuals who will perform the interventions (eg, surgeons, psychotherapists)	YES
Interventions	11a	Interventions for each group with sufficient detail to allow replication, including how and when they will be administered	YES
	11b	Criteria for discontinuing or modifying allocated interventions for a given trial participant (eg, drug dose change in response to harms, participant request, or improving/worsening disease)	YES
	11c	Strategies to improve adherence to intervention protocols, and any procedures for monitoring adherence (eg, drug tablet return, laboratory tests)	YES
	11d	Relevant concomitant care and interventions that are permitted or prohibited during the trial	YES
Outcomes	12	Primary, secondary, and other outcomes, including the specific measurement variable (eg, systolic blood pressure), analysis metric (eg, change from baseline, final value, time to event), method of aggregation (eg, median, proportion), and time point for each outcome. Explanation of the clinical relevance of chosen efficacy and harm outcomes is strongly recommended	YES
Participant timeline	13	Time schedule of enrolment, interventions (including any run-ins and washouts), assessments, and visits for participants. A schematic diagram is highly recommended (see Figure)	YES
Sample size	14	Estimated number of participants needed to achieve study objectives and how it was determined, including clinical and statistical assumptions supporting any sample size calculations	YES
Recruitment	15	Strategies for achieving adequate participant enrolment to reach target sample size	YES
Methods: Assignment of interventions (for controlled trials)			
Allocation:			

Sequence generation	16a	Method of generating the allocation sequence (eg, computer-generated random numbers), and list of any factors for stratification. To reduce predictability of a random sequence, details of any planned restriction (eg, blocking) should be provided in a separate document that is unavailable to those who enrol participants or assign interventions	YES
Allocation concealment mechanism	16b	Mechanism of implementing the allocation sequence (eg, central telephone; sequentially numbered, opaque, sealed envelopes), describing any steps to conceal the sequence until interventions are assigned	YES
Implementation	16c	Who will generate the allocation sequence, who will enrol participants, and who will assign participants to interventions	YES
Blinding (masking)	17a	Who will be blinded after assignment to interventions (eg, trial participants, care providers, outcome assessors, data analysts), and how	YES
	17b	If blinded, circumstances under which unblinding is permissible, and procedure for revealing a participant's allocated intervention during the trial	YES
Methods: Data collection, management, and analysis			
Data collection methods	18a	Plans for assessment and collection of outcome, baseline, and other trial data, including any related processes to promote data quality (eg, duplicate measurements, training of assessors) and a description of study instruments (eg, questionnaires, laboratory tests) along with their reliability and validity, if known. Reference to where data collection forms can be found, if not in the protocol	YES
	18b	Plans to promote participant retention and complete follow-up, including list of any outcome data to be collected for participants who discontinue or deviate from intervention protocols	YES
Data management	19	Plans for data entry, coding, security, and storage, including any related processes to promote data quality (eg, double data entry; range checks for data values). Reference to where details of data management procedures can be found, if not in the protocol	YES
Statistical methods	20a	Statistical methods for analysing primary and secondary outcomes. Reference to where other details of the statistical analysis plan can be found, if not in the protocol	YES
	20b	Methods for any additional analyses (eg, subgroup and adjusted analyses)	YES
	20c	Definition of analysis population relating to protocol non-adherence (eg, as randomised analysis), and any statistical methods to handle missing data (eg, multiple imputation)	YES
Methods: Monitoring			

Data monitoring	21a	Composition of data monitoring committee (DMC); summary of its role and reporting structure; statement of whether it is independent from the sponsor and competing interests; and reference to where further details about its charter can be found, if not in the protocol. Alternatively, an explanation of why a DMC is not needed	/
	21b	Description of any interim analyses and stopping guidelines, including who will have access to these interim results and make the final decision to terminate the trial	YES
Harms	22	Plans for collecting, assessing, reporting, and managing solicited and spontaneously reported adverse events and other unintended effects of trial interventions or trial conduct	YES
Auditing	23	Frequency and procedures for auditing trial conduct, if any, and whether the process will be independent from investigators and the sponsor	YES
Ethics and dissemination			
Research ethics approval	24	Plans for seeking research ethics committee/institutional review board (REC/IRB) approval	YES
Protocol amendments	25	Plans for communicating important protocol modifications (eg, changes to eligibility criteria, outcomes, analyses) to relevant parties (eg, investigators, REC/IRBs, trial participants, trial registries, journals, regulators)	YES
Consent or assent	26a	Who will obtain informed consent or assent from potential trial participants or authorised surrogates, and how (see Item 32)	YES
	26b	Additional consent provisions for collection and use of participant data and biological specimens in ancillary studies, if applicable	/
Confidentiality	27	How personal information about potential and enrolled participants will be collected, shared, and maintained in order to protect confidentiality before, during, and after the trial	YES
Declaration of interests	28	Financial and other competing interests for principal investigators for the overall trial and each study site	/
Access to data	29	Statement of who will have access to the final trial dataset, and disclosure of contractual agreements that limit such access for investigators	YES
Ancillary and post-trial care	30	Provisions, if any, for ancillary and post-trial care, and for compensation to those who suffer harm from trial participation	/

Dissemination policy	31a	Plans for investigators and sponsor to communicate trial results to participants, healthcare professionals, the public, and other relevant groups (eg, via publication, reporting in results databases, or other data sharing arrangements), including any publication restrictions	
	31b	Authorship eligibility guidelines and any intended use of professional writers	YES
	31c	Plans, if any, for granting public access to the full protocol, participant-level dataset, and statistical code	/ (In Preregistration)
Appendices			
Informed consent materials	32	Model consent form and other related documentation given to participants and authorised surrogates	YES
Biological specimens	33	Plans for collection, laboratory evaluation, and storage of biological specimens for genetic or molecular analysis in the current trial and for future use in ancillary studies, if applicable	/

*It is strongly recommended that this checklist be read in conjunction with the SPIRIT 2013 Explanation & Elaboration for important clarification on the items. Amendments to the protocol should be tracked and dated. The SPIRIT checklist is copyrighted by the SPIRIT Group under the Creative Commons "Attribution-NonCommercial-NoDerivs 3.0 Unported" license.