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Expectation-Focused Psychological Interventions (EFPI)

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Keywords
Expectation · Expectation violation · Psychological intervention · Mental disorders

Summary
Research on placebo mechanisms has shown that expectations of patients about treatment outcome are a crucial predictor of treatment success. This holds true for both physical and mental conditions. However, in the field of mental disorders, further expectations beyond treatment outcome also play a significant role. These are disorder-related expectations (e.g., catastrophizing by patients with anxiety disorders), but also expectations about one self and others (e.g., others will reject me if they discover my real personality). We postulate that treatment failures are frequently associated with not adequately addressing expectation modification. The ViolEx model offers a framework to better understand how expectations develop and how they change, but also why expectations frequently persist despite contradictory experiences. Based on this model, we offer a treatment approach and case examples to illustrate how focusing on a patient's expectations can help to optimize psychological interventions (expectation-focused psychological interventions (EFPI)). Although many other psychological interventions also address issues of expectation modification, EFPI offers a framework for a more focused approach that helps to better identify reasons for lack of treatment success.

Schlüsselwörter
Erwartung · Erwartungsverletzung · Psychotherapeutische Intervention · Psychische Störungen

Zusammenfassung
Erkenntnisse der Placebo-Forschung legen nahe, dass Erwartungen in Bezug auf die Wirksamkeit einer Behandlung ein entscheidender Prädiktor für den tatsächlichen Behandlungserfolg sind. Dieser Einfluss von Erwartungen wurde sowohl für die Behandlung von körperlichen Erkrankungen als auch von psychischen Störungen nachgewiesen. Bei psychischen Störungen spielen neben den Erwartungen an den Behandlungserfolg noch weitere Erwartungen eine wichtige Rolle. Dazu gehören störungsspezifische Erwartungen (z.B. Erwartungen bezüglich des Eintretens eines katastrophalen Ereignisses bei Patienten mit Angststörungen) ebenso wie Erwartungen über sich selbst und andere (z.B. «Andere werden mich ablehnen, wenn sie meine wahre Persönlichkeit kennenlernen»). Das Modell der Erwartungsverletzung (engl. expectation violation = ViolEx) stellt dar, wie Erwartungen bei psychischen Störungen entstehen, wie sie sich verändern und warum sie trotz gegensätzlicher Erfahrungen oft persistieren. Darauf aufbauend stellen wir einen Behandlungsansatz mit Fallbeispielen vor, der psychotherapeutische Interventionen durch das Fokussieren auf Patientenerwartungen optimieren kann (Erwartungsfokussierte psychotherapeutische Interventionen; EFPI). Zwar beinhalten einige etablierte psychotherapeutische Interventionen bereits (zum Teil implizit) erwartungsmodifizierende Elemente, doch EFPI stellen einen fokussierteren Ansatz dar, mit dessen Hilfe die Gründe für wenig erfolgreich verlaufende Therapien identifiziert werden und Ansatzpunkte für weitere Interventionen gefunden können.

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Why Psychological Interventions Should Be 'Expectation-Focused'

In this manuscript, we will offer a focused perspective on expectations, how they develop, and how to modify them in psychotherapy. While expectations are also addressed in various other psychological interventions, consequent focusing on expectations should enable the therapist to develop more efficient treatment plans. In this context, very different types of expectations can be of clinical relevance (table 1).

Patients' expectations about treatment outcome are one of the most powerful predictors of treatment response in psychotherapy, but also in various medical fields. Patients' outcome expectations contribute substantially to the so-called placebo response, and in conditions treated with antidepressants, antihypertensives, and analgesics, the response in the placebo groups explains 50–80% of the response in the drug groups [Schedlowski et al., 2015]. Expectations are strong predictors of the course and outcome of medical conditions [Bingel et al., 2011; Bohman et al., 2012; Carroll, 2011; Enck et al., 2013], also in patients undergoing surgery [Auer et al., in press], and they can even predict survival [Barefoot et al., 2011]. The expectation of symptoms (e.g., 'my back pain could worsen today') is able to induce neural activity that sensitizes for this symptom [Koyama et al., 2005]. Thus, expectations are associated with brain processes that increase the likelihood of experiencing the expected perception. Not surprisingly, expectations can contribute to the development of negative treatment effects, side effects, and the nocebo phenomenon [Barsky et al., 2002; Bohman et al., 2012; Mondaini et al., 2007; Rief et al., 2011].

Patients' treatment and outcome expectations are also crucial for psychotherapy (see Lambert in this issue; [Greenberg et al., 2006; Lewin et al., 2011; Wampold et al., 2005]), although the placebo concept is difficult to apply to psychological interventions. Outcome expectations can fully explain differences between psychological intervention effects, e.g., between mere suggestion versus suggestion under hypnosis [Kirsch et al., 2007]. Patients' treatment expectations are also a strong predictor of treatment acceptance and premature discontinuation, and they closely interact with the quality of the therapeutic relationship [Fuertes et al., 2015; Zullig et al., 2013]. Negative expectations can also contribute to negative effects of psychological interventions [Ladwig et al., 2014]. Thus, if patients' expectations are such a strong predictor of treatment acceptance, adherence, and outcome, then psychological interventions should be used to optimize these expectations.

However, there are further reasons why patients' expectations should be addressed in therapies. While the first era of psychological interventions did not relate treatment planning to psychological disorders of the patient, the introduction of the Diagnostic and Statistical Manual of Mental Disorders (DSM)-III led to a tremendous rise in disorder-specific psychological treatments (e.g., cognitive behavioral therapy (CBT) approaches for panic disorder; eye movement desensitization and reprocessing for post-traumatic stress conditions; dialectical behavior therapy for borderline personality disorder). However, even this advancement led to a stagnation in new developments, and the rise of the era of 'transdiagnostic approaches' was proclaimed [Barlow et al., 2004; Bullis et al., 2015]. One reason for switching to transdiagnostic approaches was the low specificity of the investigated mechanisms that contribute to the exacerbation and maintenance of mental disorders. Factors such as low emotion regulation competence, low social competence, and insecure bonding styles seem to be more general risk factors compared to disorder-specific mechanisms.

Beyond more general factors, there is clear evidence that 'expectations' are disorder- and problem-specific mechanisms that contribute to mental disorders [Rief et al., 2015]. In some clinical conditions, expectations are general characteristics of the disorder and displayed by every affected person, while in other conditions, expectations are also a characteristic feature but more idiosyncratic. In anxiety disor-

Table 1. Relevant patient expectation (examples)

Expectations about therapeutic process and relationship (examples)
Expectations about treatment response and outcome
Expectations about therapist support
Expectations about possibilities and options for changes in own behavior, attitudes, emotions
Expectations about self (examples)
Expectations about failing or making mistakes
Expectations that one must hide his or her real personality
Expectations about others (examples)
Expectations about behavior of others
Expectations about being rejected
Expectations about others being offensive
Expectations about not being noticed
Expectations about being a burden to others
Expectations that criticizing someone else will lead to conflicts
Expectations about disorder-relevant situations
Expectations about bearing up against pain, traumatizing memories, etc.
Expectations about the possibility to cope with threatening situations
Expectations about confrontations with phobic stimuli
Expectations about progress if first symptoms occur
Expectations about symptom control

Table 2. Typical disorder-specific expectations

Depression
I will not be able to enjoy anything
Others will not be interested to make contact with me
Others will not treat me like a valuable person
I will bring misfortune to others
Others will hurt me
I will not be able to bear it if others reject me
Posttraumatic stress disorder
I cannot stand to be reminded about this awful event
I will never be able to experience life like a normal person
People with similar features like the offender (same sex; stature; clothes;…) are as dangerous as he/she was
Others will treat me like a smirched and socially excluded person, or like a person who deserves no respect
Complex grief
If I start crying, I will never be able to stop
If I ever get as close to someone new as I was to my beloved person, I am at risk of being left by the new partner as well
I will not be able to manage my affairs alone
I will lose control if I remember his death/dying
If I participate in everyday activities/parties/.../, I will lose touch with the memories of my beloved lost person
Phobias, panic disorder
If I get in contact with (phobic stimuli), this will result in a catastrophe
I will not survive the next panic attack
If others were to see me in a state of anxieties, they would reject me/never take me seriously again
If I make any mistakes, others will think that I am a loser
I will not be able to stand it if I do something embarrassing
Psychosis, schizophrenia
Others will cause me harm
Obsessive compulsive disorder (OCD)
If I get in contact with (OCD-provoking stimuli), this will result in a catastrophe
If I do not engage in (OCD behavior), a catastrophe will happen
Chronic pain
If I move incautiously I will damage my back
I cannot function without my medicines
My problems result from a fragile spine
There are right and wrong movements

ders, patients' expectations of a dramatic outcome when being confronted with feared stimuli are a disorder-characteristic feature. In depression and psychosis, specific expectations about the behavior and attitudes of significant others can become crucial ('no one will ever love me'; 'others want to destroy me'), but they can also be more individual. Table 2 summarizes examples of specific expectations of people with different mental and psychosomatic disorders.

If expectations are a specific core feature of mental and psychosomatic disorders, and if treatment and outcome expectations are strong predictors of treatment success, interventions must be designed to change and optimize these expectations. While we acknowledge that many psychological interventions directly or indirectly modify expectations, we postulate that the success of psychological interventions can be further improved if they are more specifically designed to check the validity of patient's expectations, to better make use of expectation violation situations, and to check during the therapeutic process continuously whether the crucial expectations of patients could be changed, or whether expectation violation situations failed to modify expectations. This evaluation is not only subject to sophisticated assessment instruments, but should be a continuous part of the verbal therapeutic interaction.

How Expectations Develop, How They Are Maintained, and Why They Do Not Change That Easily

Together with colleagues from various psychological sub-specialties, we developed a model about the general development, maintenance, and change of expectations (ViolEx model) (fig. 1). In this model, we postulate 3 long-term factors that contribute to the development of expectations. The most classical one is the learning of associations via conditioning (e.g., the child learns that the mother shows up when he/she is crying; another child might learn that he/she is never safe because the father can be aggressive unexpectedly due to alcohol consumption). These expectations are generalized. However, generalized expectations can also develop due to social influences, especially within a peer group. Many stereotypes (e.g., immigrants are dangerous) do not develop because of exposure and experience, but mainly due to social influences such as the media. Finally, individual factors including biological features can further facilitate the development of specific expectations while hindering the development of others (e.g., genetic risk of developing general anxiety).

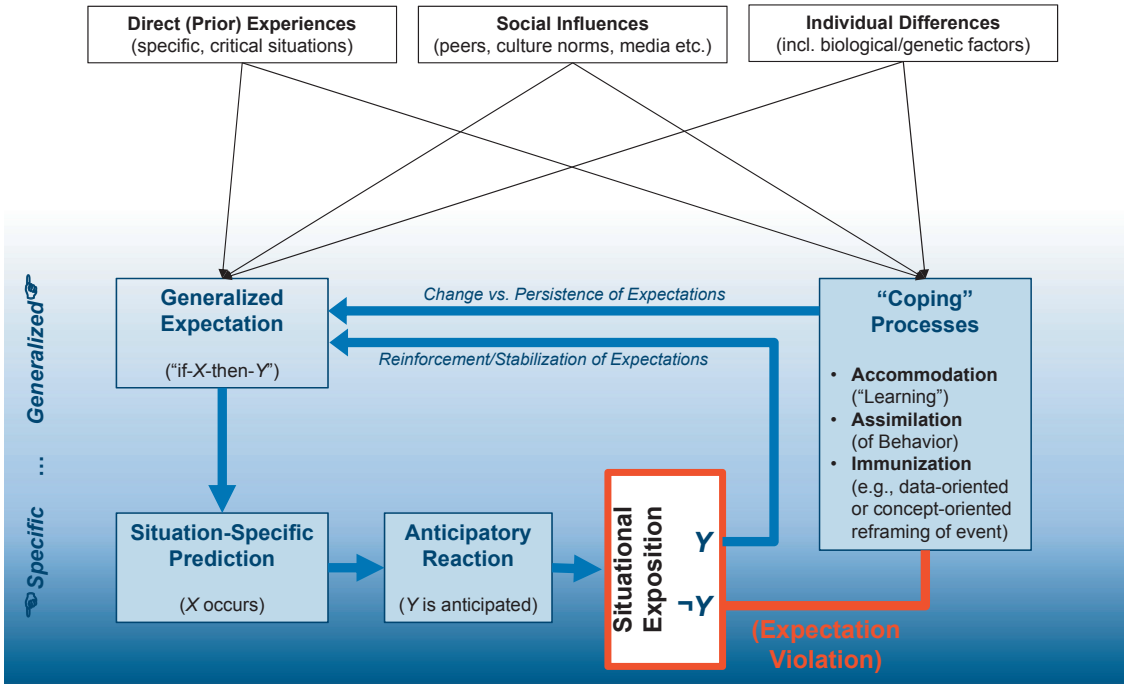

Fig. 1. The ViolEx model of the development, persistence, and change of expectations (from Rief et al. [2015] with permission).

If generalized expectations are established, the individual usually develops a resistance to changes in these expectations. In fact, from an evolutionary perspective, it would not make sense to change expectations even after minor and single unexpected events. Modifying expectations after minor expectation violations would result in unstable behavior; on the other hand, persistence of expectations despite continuous expectation violations can also be considered as non-adaptive. One of the maintaining factors of expectations are anticipatory reactions if being confronted with an expectation-stimulating situation. The individual uses processes of selective attention, which leads to an amplified and selective perception of expectation-confirming experiences, while expectation-disconfirming experiences are more and more neglected [Summerfield and de Lange, 2014]. Selective memorization of confirming information while neglecting disconfirming information further contributes to the maintenance of expectations. Thus, a self-confirming loop of expectation confirmation is established.

The phenomenon of persistence of expectations despite being exposed to expectation violation situations is of crucial relevance for psychotherapy. Why do patients with panic disorder maintain their negative expectations despite the fact that they experience over and over that heart attacks and chest pain do not ultimately lead to cardiac death? Why do depressive patients maintain their negative expectations about others and the future despite the fact that many relatives offer support to overcome the crisis? The understanding of these maintaining factors offers a clue as to how to improve our psychological interventions, and psychotherapists should be aware of these processes that hinder treatment success.

Patients use mechanisms of assimilation and immunization to devaluate expectation violation experiences. They try not to focus their attention on the expectation-violating aspects of the information but reattribute the experience ('this was just an exception to the rule') or develop cognitions why the expectation violation experience is not of relevance to their specific expectation. Psychological interventions must address and counteract these expectation-maintaining factors to achieve the necessary effect of experiences that violate the disorder-specific expectations.

Optimizing Psychological Treatments by Including Expectation-Focused Psychological Interventions

Modern psychotherapies such as CBT primarily aim at changing patients' expectations. In anxiety disorder or obsessive-compulsive disorder treatment, patients are encouraged to test their expectations concerning the outcome of a confrontation with threatening stimuli. Therapists use exposure, behavioral tests, or cognitive techniques such as Socratic questioning to challenge patients' dysfunctional expectations. However, a significant number of patients fail to draw helpful conclusions from these interventions or to generalize their experiences from the treatment setting to real life.

We hypothesize that one major reason for less successful treatment is that expectations often persist despite an apparently successful expectation violation experience. We furthermore hypothesize that the success rate of psychotherapies can be increased by putting more emphasis on patients' expectations and their violation and by addressing expectation-maintaining factors. In this section, we make suggestions how to optimize psychological treatments by including expectation-focused psychological interventions (EFPI).

Psychoeducational Session: The Role of Expectations

Patients should first be given an explanation as to why it is useful to focus on expectations. They should learn that humans maintain expectations, even if they are not confirmed or sometimes even contradicted by current experiences. We encourage providing specific examples such as 'a person with a gambling problem has the expectation of winning someday despite many contradictory experiences'. We also recommend explaining how expectations are maintained despite contradictory experiences, e.g., by discussing the correlation of learning mechanisms, attention, and social influences with persistent expectations [Rief et al., 2015].

Getting Started: Treatment Expectations and Motivation for Change

Mixed or even negative treatment and change expectations can be a major hindering factor. However, these are often not explicitly addressed at the beginning of psychological treatment and are only discussed when apparent motivational problems occur later in the treatment. We suggest that any expectations that are of relevance to these 2 motivation aspects should be addressed before the actual treatment starts. Unhelpful expectations at this point should be addressed ('I cannot imagine that psychological interventions are of any help'; 'it is impossible to change my clinical condition, because I tried so hard during the last years and I failed'; 'no one will be able to help me'; 'although I enjoy the talks with my therapist, changing anything in my life outside this office is impossible'; 'if I participate in psychotherapy, my friends/colleagues will reject me'), again taking the learning history, attention focus, and social influences into account. All kinds of pretreatment lead to the formation of some form of future treatment expectations. If these expectations about treatment and change exist, patients can be encouraged to check and evaluate them, e.g., talking to other patients who participated in psychological treatments, offering video clips of patients reporting successful treatment outcome. As most patients are referred, they can also talk to the referring person about the reasons why he/she thinks that psychotherapy can help. In any case, treatment should not be started as long as patients do not expect any benefits, or are not willing to check whether positive developments could be triggered by the intervention.

Patients also enter treatments with specific expectations about the therapist's behavior. This can be further shaped by cultural factors, and can result in either the support or the rejection of more active versus less directive aspects of the therapist's behavior.

Optimized Treatment: Considering Expectation Persistence During Treatment

If disorder-specific expectations have been identified, the therapist and patient establish how these expectations can be checked and evaluated. They decide on cognitive (e.g., pro/contra lists) or behavioral (e.g., exposure) strategies to challenge problematic expectations.

For exposure treatment, Michelle Craske [Craske, 2015; Craske et al., 2014] provided excellent ideas on how to improve its outcome through considering basic learning mechanisms (e.g. the role of context in learning). She also emphasizes the role of expectation violation in extinction learning and recommends creating exposures that maximize expectation violation experiences (e.g., through verbalizing expectations before exposure).

We propose that not only in exposure but also in other interventions a focus on expectation violation will lead to more successful treatment results. In addition, therapists should repeatedly ask the patient whether immunization and assimilation mechanisms might endanger the therapeutic change. If patients are informed about these cognitive distortions, it will be easier for them and the therapist to identify them and prevent their expectation-maintaining effects during and after the confrontation with the specific situation. Therefore, the overall attitude of the therapist should be to be empathetic regarding the development of expectations and their persistence, but to strongly encourage the patient to test and evaluate these expectations, and to avoid post-hoc confirmatory strategies. Thus, therapists should encourage the patient to seek new experiences and to overcome experience-avoiding behaviors. When evaluating potential expectation violation situations, the therapist's behavior should follow a cognitive model being as neutral as possible and hereby offering a platform for the patient to change the expectation him-/herself.

This treatment approach also requires the modification of evaluation programs for psychological interventions. If expectations are a crucial aspect of the disorder, expectation modifications must be one of the central variables of treatment outcome evaluations.

Limitations of Expectation-Focused Psychological Interventions

Expectations are predictions about the future, and we postulate that for most psychological disorders the present suffering is mainly linked to these predictions, even if exacerbation of the disorder occurred in the past and was caused by past stressful events. However, in some cases, the major problem is linked to an ongoing evaluation of past events (e.g., very strong feelings of guilt). Although many of these feelings trigger present expectations ('I cannot continue to live with these feelings of guilt'), the solution might sometimes be reached more easily by discussing the past event. In some cases, skills deficits might also be changed more easily via skills training instead of expectation focusing; however, combinations of these treatment principles are also possible.

Some Case Examples

Agoraphobia

A 25-year-old female patient was diagnosed with panic disorder and agoraphobia and referred to a psychosomatic hospital. During the clinical interview, she reported having panic attacks mostly, but

not only, in public places such as elevators or busses and therefore avoiding these places as often as possible. Based on this seemingly clear diagnosis, she started exposure-based therapy at first accompanied by a psychotherapist and later by a trained co-therapist. In line with recently published manuals and guidelines, the exposures focused on symptom tolerance and the fear of symptoms of a panic attack. Although the exposures were performed as recommended and the patient seemed highly motivated to address her fears, she did not make any progress during her hospital stay. Even after being exposed to stressful situations such as being in an elevator for long periods of time, she failed to adjust.

Trouble Shooting: This case illustrates an example of not sufficiently assessed expectations. This patient did fear the symptoms of a panic attack and their possible consequences in particular in certain agoraphobic situations, which led to the treatment decision of exposure. However, after failure of these interventions, a thorough investigation of expectations occurred, which revealed that the more distressing expectation was that people will watch her visibly experiencing symptoms and judge her. These expectations were not addressed during the exposure-based part of the treatment, and therefore the interventions were unsuccessful. In such cases, we recommend to carefully and exhaustively assess the patient's expectations and consider also expectations that are not necessarily described as typical for specific disorders.

Chronic Back Pain

A 63-year-old male pain patient was referred to outpatient psychological therapy because of his long-term back pain and back pain-related activity avoidance. Due to fear of back damage, he stopped walking stairs, driving a car for longer than 20 min, or carrying heavier weights, including his grandchildren, resulting in depressive symptoms due to loss of rewards (role of fear avoidance in pain [Chou and Shekelle, 2010; Vlaeyen and Linton, 2000]). Based on the fear avoidance model, exposure treatment was chosen as the most adequate form of treatment. The patient seemed to accept the treatment rationale and agreed to try exposures. One of his goals was to be able to spend time alone with his grandchildren, and for that he was highly motivated to reduce avoidance behaviors.

Together with his therapist, he exposed himself to several activities including carrying a 10-kg sand sack mimicking a 4-year-old child. The therapist asked before each session about the patient's expectations (e.g. 'carrying this will damage my back') and whether these expectations could be corrected through the exposure session. Although the exposures were rated as successful by both, patient and therapist, the post treatment questionnaires revealed unchanged avoidance behavior.

Trouble Shooting: This case illustrates an example of a patient who failed to change his expectations despite successful expectancy violation. Here, the therapist should consider the possibility of immunization: the patient might have reframed the exposure experience as an 'exception from the rule' that even might reinforce the dysfunctional expectation: 'this time my back was not damaged, but it might mean that next time I will have less luck' or 'maybe the carrying of a sand sack tired my back out and when I pick up my grandson soon after that it will snap'. In such a case, we recommend openly discussing the phenomenon of immunization with the patient and developing ways of targeting the immunization through specifically designed homework or further exposure sessions.

Another possibility is that the patient's attention was unconsciously shifted towards more expectation-supporting features (such as body shaking and pain increase associated with back damage). We recommend repeatedly verbalizing the fact that despite expectation-supporting features the patient's back was not damaged. This encourages the patient to actively focus his attention on perceptions that support a positive interpretation of the situation instead of searching fear avoidance-confirming perceptions.

Complex Grief

A patient was referred to therapy because of a complex grief syndrome after the death of her only child 4 years ago. Before focusing on expectations, she was encouraged to report about the past events, her grief, and her feelings of life being senseless and she herself being a burden to the rest of the world. After empathically going through her narratives, the therapist tried to focus on more cognitive modifications, addressing why it is important to regain a normal life and have new life goals, and to turn the attention to the planning of future events. However, while the empathic work regarding the loss of the child was highly appreciated by the patient, she resisted to bring her active attention to questions concerning the present and the future.

Trouble Shooting: Following the lack of treatment progress, the therapist focused on the patient's expectations more thoroughly. Together with the patient, the following crucial cognitions were identified: 'I will never be able to enjoy parts of my life again'; 'I will always be a burden to others, and if they are honest, they would prefer not to be in touch with me'; 'I am not able to combine active mourning for my child with enjoying parts of my future life'). Patient and therapist agreed that she will check these expectations, e.g., by discussing with friends the challenges of communicating with a person in mourning and whether this is 100% negative for them. After being asked so directly, some friends acknowledged that it is challenging to communicate with a grieving person, but that it is also enriching because it stimulates existential questions and the interaction is much less superficial than that typically encountered in everyday life. We compared these results with the expectations the patient had before questioning her friends. She felt that her expectations were partially confirmed but was also surprised about the positive effects she had on other persons. We also addressed the assumption that her mourning process might be disturbed if she enjoys other parts of her life. She was encouraged to actively take part in a party and be open to positive or even funny events and to make time for the mourning process the next morning, then to compare the outcome of this process with what she had expected. She reported that the morning after the party, she talked in sensu with her child about the evening before, and she was surprised to detect that the intensity of the feeling of still being bonded to the child was even stronger and that she could have positive experiences in her life without fully abandoning the mourning process.

Conclusion

Expectations are a crucial feature in the development and maintenance of mental disorders. They can be more general and closely linked to the disorder itself (like in phobias), or they can be highly idiosyncratic but contributing to an overall mental condition such as depression. We hypothesize that mainly those therapies are effective that help to modify disorder-relevant expectations; thus, the assessment and evaluation of expectations should be a central part of treatment planning, but also of scientific evaluations of treatments. We are aware that many of the well-established psychotherapies are also able to address maladaptive expectations (e.g., via a thorough behavioral analysis, or via new interaction experiences). However, focusing on expectations as suggested here helps to faster identify reasons for treatment failure and ways to further optimize psychological interventions. There is no need for trained therapists to learn a completely new psychological intervention, but rather existing interventions can be used with a redirected focus on expectations, expectation maintenance, and expectation violation. A general model about expectations helps to understand how they develop, how they sometimes change, and why they sometimes persist. Explaining to patients how cognitive and behavioral immunization and assimilation processes can prevent experiences of expectation violation, and to modify expectations afterwards are helpful tools to make behavioral experiments more powerful. Considering the large scientific knowledge about expectation development, maintenance, and change, the role of parameters such as biological, attentive, and perceptual factors, and social influences makes EFPI a treatment approach with a strong conceptual and scientifically founded background.

Disclosure Statement

The authors declare that they have no conflict of interests regarding this paper.

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