A large body of evidence confirms that patients suffering from unipolar depression exhibit amnestic, attentional, and executive deficits (e.g., Moritz et al., 2001, 2002), which are largely secondary to poor test motivation and test anxiety (Moritz et al., 2017). To illustrate our work, some of the results of our current studies are summarized here. More findings may be found in the publications listed below.

In one study, we administered an emotional variant of the Deese-Roediger-McDermott paradigm. It was confirmed that relative to controls, patients with major depression memorize emotional material more efficiently than neutral material (Moritz et al., 2005). An interesting novel finding was that emotional distractors (i.e., words not presented during encoding but shown at recognition), particularly depressive items, were significantly more often falsely recognized by depressive patients (i.e., more false alarm) relative to controls. This is the first evidence that memory structures in depressed people not only incorporate depressive information more easily but are also more susceptible to negatively-valenced intrusions. This could represent an important pathogenic mechanism of the disorder. In a further study (Moritz et al., 2008), depressed patients displayed a mood-congruency memory (MCM) bias (i.e., better recollection of depression-relevant material) only if items were appraised as more salient (i.e., personally relevant). We claim that personal salience but not valence is the key determinant of the MCM bias in depression (diploma thesis Kirsten Riedesel in cooperation with Marina G. Arzola, Stanford). In a further study by our team (Wittekind et al., 2014), we were able to provide additional evidence regarding the importance of valence and salience for false memories in depression.

In addition to memory, we investigated the ability of women suffering from depression to identify standard (emotional) facial expressions. In this study, we compared both the error rate of women with and without depression and their confidence regarding the identification of emotions. Analyses showed that depressed women had worse performance for the emotion “disgust”. Moreover, women suffering from depression showed more confidence in false answers than healthy controls (see Fieker et al., 2016).

In cooperation with Prof. Christian Otte and his colleagues, we are investigating the therapeutic role of the mineralocorticoid receptor on cognition and the association between cognition and cortisol, as well as the association between testosterone and memory deficits in depression (Dettenborn et al., 2013, Hinkelmann et al., 2009; Hinkelmann et al., 2012a; Hinkelmann et al., 2012b; Hinkelmann et al., 2013; Otte et al., 2010). Among other things, we have found that cognitive deficits in depression are associated with increased cortisol levels, whereas improvement in some cognitive domains is more associated with decreasing cortisol secretion than with improved mood.

In addition to answering basic research questions, we would like to identify ways to improve the treatment of depression. We aim to incorporate research findings into new treatment concepts and would also like to improve the dissemination of existing therapies. Over the past years, we have developed a metacognitive training for depression (D-MCT) that applies basic research findings in a clinical context. Moreover, we have evaluated self-help treatments as well as online interventions (see the next section).

Psychological Online Interventions

Although a significant amount of scientific evidence has confirmed the efficacy of various therapies for depression, only about 50% of the people suffering from depression receive an empirically-based therapy for depression. This treatment gap is caused by a lack of health care resources (e.g., long waiting times caused by a lack of therapists), as well as by patient-related treatment barriers. In a study by our team, we found that, among other factors, fears of a poor therapeutic relationship, general skepticism about psychotherapy, and fear of stigma were prominent treatment barriers (Moritz et al., 2013). In patients with
depressive symptoms associated with neurological disorders, there are additional physical or transport-related treatment barriers.

Due to this large treatment gap, we are evaluating low-threshold treatment approaches, such as psychological online interventions. Research trials of such programs conducted by our working group revealed small-to-medium effect sizes in patients with a primary diagnosis of depression (Moritz et al., 2012), small effect sizes in patients with epilepsy and comorbid depression (Schröder et al., 2014), and medium effect sizes in patients with multiple sclerosis and comorbid depression (Fischer et al., 2015).

Furthermore, our group was part of the multicenter EVIDENT-project that was designed to examine the efficacy of the online intervention “deprexis” in over 1,000 people with symptoms of depression over a 3-year period (please find below a list of publications resulting from our cooperation in the EVIDENT study).

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**Publications resulting from the EVIDENT Study**


