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). In our research, we attempt to further elucidate these deficits as well as to shed light on additional questions related to basic neuropsychological research. 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 a completed 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, Gläscher, & Brassen, 2005). An interesting novel finding was that emotionally distracting material (i.e., words not presented during encoding but shown at recognition), particularly depressive items, was significantly more often falsely recognized by depressive patients (i.e., they exhibited an enhanced false alarm rate) 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 negative-valenced intrusions. This could represent an important pathogenetic mechanism of the disorder. In a further study (see Moritz, Voigt, Arzola, & Otte, 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 confirming evidence regarding the importance of valence and salience for false memories in depression.

Apart from memory, in a recently completed study we investigated the identification of standard (emotional) facial expressions by women suffering from depression. 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, Moritz, Köther, & Jelinek, 2016).

In cooperation with Prof. Christian Otte and his colleagues, we are investigating the therapeutic effect of the modulation of the mineralocorticoid receptor on cognition and the relationship between cognition and cortisol as well as the relation between testosterone and memory deficits in depression (Dettenborn et al., 2013, Hinkelmann et al., 2009; Hinkelmann, Moritz, Botzenhardt, Muhtz, et al., 2012; Hinkelmann, Moritz, Botzenhardt, Riedesel, et al., 2012; 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 the efficacy of various therapies for depression is scientifically proven, only about 50% of the people suffering from depression receive a depression-specific therapy while depressed. This treatment

gap is caused by a lack of health care resources (e.g., long waiting times to be placed in outpatient therapy programs) as well as by the treatment barriers that those with depression face. 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 especially significant treatment barriers (Moritz, Schröder, Meyer, & Hauschildt, 2012). In patients with depressive symptoms associated with neurological disorders, there are additional physical or transport-related treatment barriers.

Due to the large treatment gap, we are increasingly evaluating low-threshold treatment approaches, such as psychological online interventions, which many studies have already proven to be effective. Trials of such programs conducted by our working group revealed small-to-medium effect sizes in patients with a primary diagnosis of depression (Moritz, Schilling, Hauschildt, Schröder, & Treszl, 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 is part of the multicenter EVIDENT-project that is designed to examine the efficacy of the online intervention “deprexis” in over 1,000 people with symptoms of depression over a 3-year period. Despite the strong evidence for the efficacy of psychological online interventions, one of our studies found that psychotherapists remain skeptical about such approaches (Schröder et al., 2014). Therefore, our next step is to investigate the attitudes of people with symptoms of depression and of psychotherapists towards psychological online interventions in greater detail, for which purpose we have developed the four-dimensional Attitudes towards Psychological Online Interventions Questionnaire (APOI).

Research Team

- Dipl.-Psych. Martina Fieker
- PD Dr. Lena Jelinek
- Prof. Dr. Steffen Moritz
- Dr. Johanna Schröder

Cooperating Partners

- PD Dr. Kim Hinkelmann (Department of Psychiatry and Psychotherapy, Charité, Berlin)
- Prof. Dr. Holger Jahn (Department of Psychiatry and Psychotherapy, Hamburg)
- PD Dr. Christoph Muhtz (Department for Psychosomatic Medicine Eilbek, Hamburg)
- Prof. Dr. Christian Otte (Department of Psychiatry and Psychotherapy, Charité, Berlin)

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