



**Emotion Regulation in Depression –
Comparing Emotion Regulation strategies, using the measurements of Skin Conductance
Response, Electrocardiogram, Pulse Volume Amplitude, Temperature, and Subjective
Assessment**

Exposé zur Masterarbeit von Kathrin Diconne

Major Depression Disorder (MDD) is, among others, characterized by symptoms such as fatigue or loss of energy, depressed mood or irritability, decreased interest or pleasure, plans or thoughts of suicide as well as guilt and worthlessness (DSM-V; APA 2013). Findings of previous research suggest a connection between depression and maladaptive emotion regulation (Garnefski and Kraaij, 2006; Martin and Dahlen, 2005). Different forms of therapies and trainings have included emotion regulation strategies to enhance well-being. Examples are the *Emotion Regulation Training* (ERT) by Schuppert and colleagues (2009), as well as the *Adaptive Coping with Emotions* (ACE) model by Berking (2010).

The present study seeks to analyze whether competencies in emotion regulation vary between individuals considering depression severity (current depression, former depression, healthy individuals), as well as testing if there are differences between these three groups considering the general skin conductance (number and amplitude), temperature of forehead and finger, pulse volume amplitude, electrocardiogram variables as well as subjective assessment.

Three strategies (*acceptance, cognitive restructuring, and self-compassion*), as well as a *pause-condition* were used in this study. During a computer-based procedure, negative emotions were induced to 68 individuals, using self-centered statements accompanied by music. Subsequently the different strategies were taught, which the participants were asked to apply in order to regulate their negative emotions.

For previous studies describe a relation between emotions and general physiological arousal (Lange and James, 1922), and findings suggest a relation between depressed mood and the decrease of the degree of parasympathetic heart-control during a stress situation (Hughes and Stoney, 2000), using electrocardiogram variables as well as pulse volume amplitude in this present study, seems justified. Furthermore, it has been shown that induced emotions impact the skin conductance level (Fernández et al., 2012; Kreibig et al., 2013). The subjective assessment might help determining the congruency of physiological measurements and/ or changes and subjective perception.

Literatur

- Berking, M. (2010). *Training emotionaler Kompetenzen* (2nd ed.). Berlin, Heidelberg: Springer-Verlag.
- Fernández, C., Pascual, J. C., Soler, J., Elices, M., Portella, M. J., & Fernández-Abascal, E. (2012). Physiological Responses Induced by Emotion-Eliciting Films. *Applied Psychophysiology and Biofeedback*, *37*, 73-79.
- Garnefski, N., & Kraaij, V. (2006). Relationships between cognitive emotion regulation strategies and depressive symptoms: A comparative study of five specific samples. *Personality and Individual Differences*, *40*, 1659–1669.
- Hughes, J. W., & Stoney, C. M. (2000). Depressed mood is related to high-frequency heart rate variability during stressors. *Psychosomatic Medicine*, *62*, 769-803.
- Kreibig, S. D., Samson, A. C., & Gross, J. J. (2013). The psychophysiology of mixed emotional states. *Psychophysiology*, *50*, 799-811.
- Lange, C. G., & James, W. (1922). *The emotions, Vol. 1*. Baltimore: Williams & Wilkins.
- Martin, R. C., & Dahlen, E. R. (2005). Cognitive emotion regulation in the prediction of depression, anxiety, stress, and anger. *Personality and Individual Differences*, *39*, 1249–1260.
- Schuppert, H. M., Giesen-Bloo, J., Gemert van, T. G., Wiersema, H. M., Minderaa, R. B., Emmelkamp, P. M., & Nauta, M. H. (2009). Effectiveness of an Emotion Regulation Group Training for Adolescents – a Randomized Controlled Pilot Study. *Clinical Psychology and Psychotherapy*, *16*, 467-478.