

concentrations on psychotherapy process variables in general and the therapeutic alliance in particular is still unknown. We investigated these associations in the context of a six weeks Internet-based cognitive behavioural therapy for posttraumatic stress disorder. *Method:* We performed regression analyses to test whether endogenous oxytocin concentrations, measured pre-therapy under fasted, unstimulated conditions, in blood of $n = 31$ German Armed Forces soldiers, predicted early therapeutic alliance. Moreover, oxytocin's impact on other psychotherapy process variables was explored. We described courses of psychotherapy expectation and evaluation, resource activation, clarification of meaning, problem actuation and mastery, as well as dropout, assessed pre-, peri- and post-therapy, as a function of pre-therapy oxytocin concentrations. *Results:* Data analysis is still in progress. Results will be presented in the talk. *Conclusion:* Our results contribute to the discussion whether oxytocin's prosocial effects might indeed be transferred to psychotherapy by means of an alliance-promoting drug or whether, instead, posttraumatic stress symptoms are a counterindication.

Salivary Cortisol and Alpha-Amylase as Predictors of Response to an Internet-Based Treatment for German Soldiers with PTSD

Sarah Schumacher^a, Sinha Engel^a, Helen Niemeyer^a, Annika Küster^a, Jan Spies^a, Nadine Skoluda^b, Urs Nater^b, Heinrich Rau^c, and Christine Knaevelsrud^a

^aFreie Universität Berlin, Germany; ^bUniversität Wien, Austria; ^cGerman Armed Forces Hospital, Berlin, Germany

Background: Military personnel is particularly at risk to be exposed to traumatic events and to subsequently develop posttraumatic stress disorder (PTSD). Disturbances in the hypothalamic-pituitary-adrenal (HPA) axis and dysregulations in the autonomic nervous system (ANS) have been related to the development and maintenance of PTSD. Given the modulating role of stress markers on cognitive processes, it is conceivable that pronounced alterations in HPA axis and ANS regulation could be associated with less favourable responses to psychotherapy. *Objective:* The aim of the study was to investigate whether pre-treatment salivary cortisol and salivary alpha-amylase concentrations, reflecting HPA axis and ANS regulation respectively, predict response to psychological treatment in German soldiers with PTSD. *Method:* Soldiers of the German Armed Forces, diagnosed with PTSD according to the CAPS-5, were randomized to an experimental group receiving a six-week Internet-based cognitive behavioural therapy (iCBT) or a waitlist group, which received the same treatment after a period of six weeks. On two consecutive workdays, a diurnal profile consisting of six saliva samples was collected for analysis of

cortisol and alpha-amylase before, directly after and three months after iCBT. For the current analysis, only pre-treatment concentrations of cortisol and alpha-amylase were analysed. Therefore, the cortisol awakening response (CAR), the alpha-amylase awakening response (AAR), the daily total cortisol output and the daily total alpha-amylase output were calculated and used as predictors of treatment outcome, assessed by CAPS-5. *Results and Conclusion:* Data analysis is still in progress. Results and discussion of results will be presented in the talk.

Individual Prediction of Trauma-Focused Therapy Outcome in Veterans with Posttraumatic Stress Disorder using Neuroimaging Data

Paul Zhutovsky^a, Rajat Thomas^a, Tim Varkevisser^{b,c,d}, Miranda Olff^{a,e}, Sanne van Rooij^f, Mitzy Kennis^g, Guido van Wingen^a, and Elbert Geuze^{b,c}

^aAmsterdam UMC, University of Amsterdam, the Netherlands; ^bUniversity Medical Center, Utrecht, the Netherlands; ^cResearch Center Military Mental Health Care, Utrecht, the Netherlands; ^dDepartment of Experimental Psychology, Utrecht University, the Netherlands; ^eArq Psychotrauma Expert Group, the Netherlands; ^fEmory University School of Medicine, USA; ^gDepartment of Clinical Psychology, Utrecht University, the Netherlands

Background: Trauma-focused psychotherapy is a first-line treatment for PTSD but 30–50% of patients do not benefit sufficiently (Bradley et al., 2005). Neuroimaging has been proposed as a potential biomarker predicting treatment-response in PTSD patients (Colvonen et al., 2017; Yuan et al., 2018). *Objective:* We investigated whether neuroimaging data could distinguish between treatment responders and non-responders on the group and single-subject level. *Method:* A total of 44 male veterans with PTSD underwent baseline structural and resting-state MRI followed by trauma-focused therapy (EMDR or TF-CBT). Grey-matter volumes (GMV) were extracted from the MRI data and resting-state networks (RSN) were estimated using group-ICA of data from 28 matched trauma-exposed healthy controls. GMV and RSNs were used to find differences between responders and non-responders on the group and single-subject level. Treatment response was defined as 30% decrease in total Clinician-Administered PTSD Scale for the DSM-IV (CAPS-IV) score from pre- to post-treatment assessment. Gaussian process classifiers with 10 times repeated 10-fold cross-validation were used for classification. *Results:* An RSN centred on the pre-SMA could distinguish between responders and non-responders on an individual level with 81.4% accuracy ($p < .001$), 84.5% sensitivity, 78% specificity and AUC of 0.93, while an RSN centred on the bilateral superior frontal gyrus differed between groups ($p_{FWE} < .05$). No significant single-subject classification or group differences were