

Introductory Remarks to Symposium 19

Impact of early traumatic stress on brain development, and mental and somatic health

Christian Schmahl and Katja Seitz, Mannheim and Heidelberg

The Research Training Group (GRK2350) investigates psychosocial, neurobiological, and somatic sequelae of adverse childhood experiences (ACE). ACE such as sexual and physical abuse or neglect constitute a massive stressor with long-lasting consequences for mental and somatic health. Despite their obvious relatedness, neither the causal relation nor the mechanisms involved are clear. Traumatic experiences are diverse, differing in type, timing, and intensity with social support and other protective factors contributing to this. ACE-related manifestations range from psychosocial to somatic problems such as heightened stress sensitivity, interpersonal problems, substance dependence, chronic pain, or inflammatory and metabolic diseases. Therefore, the central aims of the GRK are (1) investigation of the role of type, timing and intensity of ACE in the emergence of ACE-related disorders; (2) elucidation of the psychosocial, neurobiological and epigenetic mechanisms underlying ACE-related disorders; (3) development of novel treatment possibilities for ACE-related conditions.

In the first presentation (Schmahl) of this symposium, an overview of the research questions and methods of the GRK will be given. In addition, findings on critical periods in human and rodent brain development and brain function will be demonstrated. A second presentation (Krause-Utz) focuses on the association between heart rate variability (HRV) and working memory during emotional distraction in individuals with ACE. Severity of ACE predicted worse performance in this task, mediated by altered HRV. The third presentation (Seitz) reports on findings from an emotional face perception paradigm in humans with early traumatic experience. The fourth presentation (Atanasova) focusses on the impact of traumatic stress in patients with inflammatory bowel disease, demonstrating how disturbances in interoceptive processes contribute to alterations in emotion and cognition in individuals with ACE. In a student presentation (Schulze), a network analysis on ACE, Borderline Personality Disorder, attachment and social support will be presented.

Symposium 19

*Thursday, March 23, 2023
16:15 - 18:15, Lecture Hall 104*

Chairs: Christian Schmahl and Katja Seitz,
Mannheim and Heidelberg

- 16:15 Christian Schmahl, Mannheim
INFLUENCE OF TYPE AND TIMING OF TRAUMATIC STRESS ON BRAIN STRUCTURE AND FUNCTION (S19-1)
- 16:35 Annegret Krause-Utz, Leiden, The Netherlands
SEVERITY OF CHILDHOOD MALTREATMENT PREDICTS REACTION TIMES AND HEART RATE VARIABILITY DURING AN EMOTIONAL WORKING MEMORY TASK IN BORDERLINE PERSONALITY DISORDER (S19-2)
- 16:55 Katja Seitz, Heidelberg
ASSOCIATION BETWEEN ADVERSE CHILDHOOD EXPERIENCES AND EMOTIONAL FACE PERCEPTION IN A TRANSDIAGNOSTIC SAMPLE (S19-3)
- 17:15 Konstantina Atanasova, Mannheim
BODY MATTERS IN EMOTION: INTEROCEPTIVE PROCESSING IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE (S19-4)
- 17:35 Anna Schulze, Mannheim
ON THE INTERPLAY BETWEEN BORDERLINE PERSONALITY FEATURES, CHILDHOOD TRAUMA SEVERITY, ATTACHMENT TYPES, AND SOCIAL SUPPORT (S19-5)
- 17:55 **Discussion**



GRK 2350