



Executive regulation of economic decision-making in schizophrenia

Dr. Daniel Holt (Institute of Psychology)

Prof. Dr. Joachim Funke (Institute of Psychology)

Prof. Dr. Matthias Weisbrod (HD University Hospital / Center for Psychosocial
Medicine)

Dr. Katlehn Rodewald (HD University Hospital / Center for Psychosocial Medicine)

Dr. Peter Dürsch (Alfred-Weber-Institute for Economics)

Prof. Dr. Christiane Schwierén (Alfred-Weber-Institute for Economics)

Time frame: March 2013 - March 2014

Format: Pilotstudies, Conference and Publications

Abstract:

It is well established that patients with schizophrenia show a broad range of cognitive deficits that also impair their everyday functioning. This includes a deficit in handling finances and personal economic decision making. While deficits of this type are highly relevant for patients in practical terms and have been shown to correlate with quality of life, number of hospitalizations and self-efficacy in general, there are so far no conclusive theoretical models of how they can be explained. It is the aim of this project to address this research niche by employing a multidisciplinary approach emphasizing the cognitive control processes that underlie self-regulated economic behavior in schizophrenia. To do so we will combine a basic psychiatric perspective with insights from the cognitive psychology of problem-solving and research paradigms taken from behavioral economics. An association of cognitive ability and financial capacity has been shown on a global

level using questionnaires and rating tools. We propose that the deficits of patients in financial and economic decision making may be specifically related to executive control functions – such as working memory, attention or impulse control – which facilitate goal-directed and self-regulated behavior in many behavioral domains. As executive functions have been shown to be implicated in economic decision making and executive deficits are particularly pronounced in patients in schizophrenia, this appears to be a plausible explanation.

In a first pilot study with healthy volunteers we will employ measures of financial capacity, executive functioning (e.g. working memory, attention, impulse control), self-reported executive functioning, and schizotypy as a personality trait. This study serves to investigate the hypothesized link between financial capacity and executive functions and to establish which aspects of executive functioning are most closely associated with these abilities. In parallel, we will carry out an experimental study employing standard paradigms from behavioral economics such as lottery tasks, measures of temporal discounting and dynamic consistency in decision making. The goal here is to establish which aspects of executive functioning are most closely associated with economic decision-making and problem solving capacity when measured behaviorally. Finally, we will combine insights from these screening studies to conduct a small trial with patients with schizophrenia as direct preparation for the larger scale study that will form the starting point for a subsequent third-party funding proposal.