

Research Area 3

Leveraging diversity to optimize and individualize digital and personal interventions

To design targeted prevention, early intervention and therapy, we use computational modelling and digital tools to translate and back-translate basic research findings into mechanism-based dimensional prevention and treatment strategies (Heinz et al., 2020; Liu et al., 2020, Schad et al., 2020). To optimize efficacy and efficiency of targeted personal and digital interventions, our models take into account (epi)genetic, physical, behavioral, social and cultural diversity (Ripke et al., 2014; Böge et al., 2019; Zagorscak et al., 2020). One particular area with immediate patient benefit focuses on large clinical trials: CMH faculty are currently conducting over 50 clinical trials that apply innovative methodology including, among others, tailored pharmacological treatment, (augmented) psychotherapy, and digital interventions. Further, we advance clinical trial methodology, for example by developing adaptive platform trials for targeted interventions in stratified groups of patients (Otte et al., 2016; Gold et al., 2020).

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