M22. COMMON GENETIC VARIANTS ASSOCIATED WITH PERSONALITY DIMENSIONS IN THE HEIDELBERG COHORT STUDY OF THE ELDERLY (HEIDE)
Urs Heilbronner1, Till F. M. Andlauer2, Sergi Papiol1, Monika Budde1, Jana Strohmaier1, Fabian Streit3, Josef Frank3, Manfred Amelang4, Til Stürmer5, Bertram Müller-Myhsok5, Marcella Rietschel3, Thomas G. Schulze1
1Institute of Psychiatric Phenomics and Genomics, Medical Center of the University of Munich, 2Max Planck Institute of Psychiatry, Munich, Germany, 3Department of Genetic Epidemiology in Psychiatry, Central Institute of Mental Health, Medical Faculty Mannheim, University of Heidelberg, Germany, 4Department of Psychology, University of Heidelberg, Germany, 5Department of Epidemiology, UNC Gillings School of Global Public Health, Chapel Hill, USA

Background
Personality traits show substantial heritable components (e.g. Power and Pluess, 2015). The HeiDE study is an ongoing longitudinal investigation. At baseline, in the beginning of the 1990s, it assessed demographics and lifestyle factors together with an array of personality tests (n=5,114). At follow-up, approximately ten years later, putative associations of personality dimensions with incidence of somatic disorders were investigated (e.g. Stürmer et al., 2006). Principal components factor analysis was used to identify five latent personality dimensions (“The Heidelberg Five”; e.g. Amelang et al., 2004), interpreted as emotional lability, lack of behavioral control, type-A-behavior, locus of control over disease, and psychoticism. At this follow-up, DNA from responding participants was collected via mouthwash sample and analyzed on the PsychChip (Illumina; n=2,734). This sample presents a unique opportunity to study the association of personality, genetics, and longitudinally defined phenotypes. We have therefore embarked to study common genetic variants underlying those previously identified personality dimensions.

Methods
Calculation of individual factor scores
Personality tests collected at baseline were the following: Time Urgency and Perpetual Activation Scale, State-Trait-Anger Expression-Inventory, Hostility, Exaggerated social control, Depression Scale, Sense of Coherence Scale, Optimism, Questionnaire for measuring the locus of control over diseases, Social Support-Scale, Eysenck-Personality-Inventory, and Psychoticism. Original data were re-analyzed using principal components factor analysis with varimax rotation. We used Bartlett’s method to calculate individual factor scores.

Analysis of common genetic variants
We have imputed common variants (MAF 0.01) using the 1000 Genomes Phase 3 reference panel. We plan to investigate personality dimensions within a multivariate framework that accounts for association of multiple phenotypes with a SNP.

Results
Replication of latent personality dimensions
The first ten Eigenvalues of the principal components analysis were 5.08-2.26-1.45-1.17-0.99-0.84-0.79-0.70-0.68-0.64 and are thus in perfect agreement with previously reported analyses.

Genetic analyses
We will present results of our research project at the meeting.

Discussion
References


Disclosure: Nothing to Disclose.