Currently it is known that socio-emotional problems run in the same families across generations. However, the mechanisms that connect socio-emotional problems across generations are poorly understood. The pathways may be related to environmental, genetic or epigenetic transmission across generations. The present study will examine: (1) the extent to which socio-emotional well-being transmits across generations; (2) life-course trajectories of socio-emotional well-being within individuals, starting from prenatal period; (3) mechanisms behind transmission, including genetic, epigenetic, neurobiological, and social pathways; (4) potential critical developmental phases in transmission and their effects on future well-being.

Examination of these questions require longitudinal multi-wave datasets with repeated measurements of socio-emotional factors across development. We will include 3 longitudinal well-characterized datasets, each of which has been followed up starting from early life (prenatal period, birth, early childhood) and extending into adulthood. One of the datasets includes data from four generations (grandparents; parents; participants; participants’ offspring). Modern functional brain-imaging techniques allow direct in vivo assessment of neural pathways and neurotransmitter activity in the living human brain. Genome-wide association study conducted at the Trustsanger Institute will provide genetic-data and enable examination of genetic markers and gene expression. The study will be done in an international multidisciplinary framework including methods from psychology, psychiatry, social sciences, epidemiology, neurology, and advanced statistics (multilevel and longitudinal modeling).

This study is innovative and will bring scientific evidence to answer questions on human well-being that are relevant to public health.

The uniqueness lies in a) the use of an inter-generational approach with unique data comparing four generations, b) Use of lifespan follow-up data: well-being and adjustment from early life into middle age, c) collaboration in a multidisciplinary national and international setting, d) building a comprehensive, cross-disciplinary understanding of human behavior that transcends and brings together approaches from biological and social sciences. Our mission is to disseminate our findings to general public and policy-makers to be used in initiatives to improve early prevention and public health.