



# Research Week 2020

## Sex differences in Big Five personality trajectories among adolescents and young adults

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### Abstract

Personality plays a role in phenotypic risk and resilience across the lifetime. Research on personality development during adolescence is mixed and suggests both increases and decreases in individual traits (e.g. extroversion, agreeableness, etc.) with age. To address these disparate findings, this study capitalized on a relatively large study, with multiple waves of longitudinal data, to investigate linear and non-linear changes in personality across adolescence and young adulthood and as a function of sex. Select data from the National Consortium on Alcohol and Neurodevelopment in Adolescence (NCANDA) study, a 5-site, cohort-sequential longitudinal study of adolescent neurodevelopment (age 12 to 21 at study entry) were analyzed. 829 participants completed the Ten-Item Personality Inventory (TIPI) at baseline and 4 annual follow-up visits, with most completing 3 out of 4 follow-ups. To assess for both linear and non-linear changes on the 5 TIPI subscales (agreeableness, conscientiousness, emotional stability, extroversion, and openness), generalized additive mixed models (GAMM) were fit for each subscale, separately. There were significant developmental effects across all five factors of the TIPI. Males had lower overall levels of conscientiousness and agreeableness, compared to females, but both males and females demonstrated linear increases in these factors with increasing age. Males and females decreased in extroversion in early adolescence then deviated in development in late adolescence, with males demonstrating steeper decreases than females. Females decreased in emotional stability in early adolescence then increased in late adolescence, while males showed the opposite pattern. This study replicated previous reports of increasing conscientiousness and agreeableness with age, and provides novel evidence of non-linear changes in extroversion and emotional stability as a function of sex. These sex differences and non-linear patterns in personality development help reconcile conflicting reports of personality change. Future research should attempt to replicate these sex differences in development on more comprehensive measures of personality.