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Assortative mating for autistic traits, systemizing, and theory of mind

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ABSTRACT:

We aimed to test the hypothesis that traits associated with autism spectrum conditions are subject to assortative mating. Study 1 examined self-reported autistic traits (Autism Spectrum Quotient [AQ]), systemizing (Systemizing Quotient-Revised [SQ-R]), and empathizing (Empathy Quotient [EQ]), as well as behavioral measures related to socio-perceptual Theory of Mind (Reading the Mind in the Eyes Test [RMET]) and systemizing (Embedded Figures Task [EFT]). Variable-centered analyses revealed couple-similarity correlations for AQ ($r[102]=0.305$, $p=0.002$), SQ-R ($r[101]=0.263$, $p=0.007$), RMET ($r[53]=0.438$, $p<0.001$) and EFT ($r[56]=0.423$, $p<0.001$), but not EQ ($r[100]=-0.018$, $p=0.860$). Further analysis suggested people pair with others more similar than chance (initial assortment) rather than become alike during a relationship (convergence), and that they seek out similar partners (active assortment) rather than pair with similar people due to social stratification (social homogamy). We next used couple-centered analyses to compare similarity scores between actual couples and the average of all other possible male-female pairings within the dataset. Actual couples were more similar for AQ ($d=0.250$, $p=0.002$), SQ-R ($d=0.211$, $p=0.007$), RMET ($d=0.393$, $p=0.007$) and EFT ($d=0.365$, $p=0.006$), but not EQ ($d=-0.002$, $p=0.980$). In Study 2, we replicated the variable-centered ($r[94]=0.284$, $p=0.005$) and couple-centered results ($d=0.253$, $p=0.032$) for socio-perceptual Theory of Mind (RMET). However, there was no evidence for assortment for socio-cognitive Theory of Mind when using the Stiller-Dunbar Stories Task (variable-centered: $r[98]=0.048$, $p=0.635$; couple-centered, $d=0.012$, $p=0.917$). Random-effects meta-analysis ($k=16$, $n=5,892$) confirmed a significant couple-similarity correlation for autistic traits, $r=0.186$, $p<0.0001$. These findings support the assortative mating theory of autism and should be considered when estimating heritability.

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