GENETICS

Teen friends a genetic match

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Human social pairs — such as spouses and adult friends — are often more similar genetically than randomly selected individuals. The resulting genetically homogeneous social networks can impact the direction of multiple life outcomes, such as health choices and educational attainment. Adolescence is a particularly formative life stage, where the potential for friends to influence development is high, and so it is important to understand what role genetic assortment might play in directing this development.

Benjamin Domingue and colleagues examined evidence for genetic similarity among teenage groups of friends in a US population and for potential socio-genetic influences, whereby an individual's developmental outcomes could be

influenced by the genes of their friends and peers. The authors compared the genetic and social network data of 5,500 individuals from the National Longitudinal Study of Adolescent to Adult Health. They found significant genetic similarity overall between friend pairs and positive correlations based on genes specifically related to body mass index and educational attainment, but not height. Similar results were found between school mates in general, suggesting that, while people may choose genetically similar friends based on shared characteristics, institutions such as schools may also stratify the population into more homogenous subgroups. Finally, the study found evidence for a socio-genetic effect, with the genes of friends and schoolmates significantly predicting an individual's level of educational attainment later in life.

These findings are a caution that potential socio-genetic effects should be taken into account more in genome-wide association studies. They also highlight a way to parse the significance of genetic and environmental influences in studies of social development.

John Carson

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