Can genetic discoveries for age-at-first-birth predict disinhibitory behaviours?

By Dr. Jessica K Edwards

Being pregnant for the first time at a young age is associated with disinhibitory behaviours, such as low self-control, antisocial behaviour and substance misuse. A recent genome wide association study (GWAS) demonstrated that genes have a role in these associations. Now, researchers have tested the hypothesis that molecular-genetic influences on age-at-first-birth can predict disinhibition.
Leah Richmond-Rakerd and colleagues included nearly 3,000 participants with genotype data from the longitudinal Environmental Risk (E-Risk) and Dunedin studies in their analysis. They calculated the polygenic risk score for age-at-first-birth and tested whether it was associated with disinhibitory outcomes across the participants’ lives. In both cohorts, the polygenic risk score modestly predicted low childhood self-control, externalizing psychopathology, criminal offending, substance dependence, and the number of sexual partners. Childhood disinhibition partly mediated the associations between the polygenic score and reproductive behaviours.

“Our findings suggest that age-at-first-birth is a useful measure, not just for researchers who are interested in the genetics of reproductive behaviour, but also for researchers who are interested in the genetics of disinhibition,” explains Richmond-Rakerd. “Going forward, an important goal for future work is to identify the mechanisms that connect molecular–genetic discoveries for age-at-first-birth with disinhibitory behaviours.”

**Glossary:**

**Disinhibition:** the inability to suppress inappropriate or unwanted behaviours. Affected individuals might show a lack of restraint or regard for social norms, or participate in unnecessarily risky or dangerous activities.

**Polygenic risk score:** a quantification of the cumulative effects of a number of genetic variants (which might individually have very small effects on susceptibility) on a particular trait with a genetic component.

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**Referring to:**


**References:**


