In This Issue

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A brief summary of the articles appearing in this issue of *Biological Psychiatry*.

Genetic Correlations in ADHD: Eating Disorders and Autism

Attention-deficit/hyperactivity disorder (ADHD) and eating disorders co-occur more commonly than one would expect by chance. However, it is not yet clear whether this observation reflects shared genetic risk mechanisms across these disorders. Using a nationwide population registry, **Yao *et al.*** (pages 577–586) found that people diagnosed with ADHD and their relatives were more likely to be diagnosed with eating disorders than people without ADHD and their relatives. The authors also found evidence for shared familial liability between ADHD and eating disorders, and stronger genetic correlation of ADHD with non–anorexia nervosa eating disorders than with anorexia nervosa. Further, a genotype-based risk measure of ADHD (polygenic risk score) was positively correlated with eating disorder symptoms.

Both ADHD and autism spectrum disorder (ASD) are highly heritable neurodevelopmental disorders that share common genetic factors. **Solberg *et al.*** (pages 587–598) used data from a national registry to compare the associations of adulthood ASD and ADHD with other psychiatric disorders on both phenotypic and genetic levels. The authors identified increased prevalence of substance use disorder in adults with ADHD, but increased prevalence of schizophrenia in adults with ASD. Genetic correlations differed between ADHD and ASD for substance use disorder proxies and personality traits. These findings suggest that the distinct patterns of psychiatric comorbidities associated with particular psychiatric disorders reflect the patterns of shared genetic risk mechanisms for those disorders.

Epigenome-wide Association Study of Adult ADHD Symptoms

ADHD symptoms have been linked to DNA methylation in children, but it is unknown if these associations persist into adulthood. In this epigenome-wide association study of ADHD symptoms in three adult cohorts, **van Dongen *et al.*** (pages 599–607) identified several cohort-specific differentially methylated regions in blood, but meta-analysis revealed considerable heterogeneity with no differently methylated positions or regions detected across cohorts. These findings suggest that future epigenetic research of psychiatric traits should examine the role of factors such as age and lifetime exposures.

Meta-analysis of Functional Dopamine Polymorphisms

Polymorphisms in dopaminergic genes (e.g., those encoding dopamine receptors and enzymes) are often reported to affect brain function and dysfunction. However, such links are indirect and require complementary evidence that the polymorphism actually impacts the function of the gene concerned. **Tunbridge *et al.*** (pages 608–620) carried out systematic reviews and meta-analyses for 14 dopamine genes to evaluate this evidence. The authors found effects for functional polymorphisms in *COMT, DBH*, *MAOA*, and *DRD2*, but not in the other commonly studied polymorphisms. These results may be informative for future studies that intend to utilize genetic markers of dopamine function.

Dopamine Transporter Network and Perinatal Complications

Evidence suggests that both dopamine transporter gene variants and perinatal complications may affect the development of brain dopaminergic signaling, leading to attentional problems in childhood. Here, **Miguel *et al.*** (pages 621–630) constructed an expression-based polygenic risk score reflecting *DAT1* network function in the prefrontal cortex of healthy children from two birth cohorts. The authors found an association between perinatal hypoxic-ischemic–associated conditions and individual differences in attentional flexibility, but only in the high-genetic-risk group. These data suggest that environmental conditions and genetic differences in prefrontal cortex dopamine transmission may moderate risk for cognitive impairments.

Joint Attention in Infants and ASD Risk

Autism spectrum disorder is associated with a reduced tendency to engage in joint attention, which is a social interaction that can be either self-initiated or initiated via responding to others. Using eye-tracking technology in a sample of infants at high and low risk for ASD, **Nyström *et al.*** (pages 631–638) report that 10-month-old infants who were later diagnosed with ASD showed abnormalities in self-initiation of joint attention, but not in responding to others' initiation of joint attention, suggesting that this process may be an important target for future prodromal intervention trials.

Gender Trends: Authorship in Psychiatry Journals

Data suggest that rates of medical school enrollment and residency in psychiatry are nearly equivalent between women and men, but women are underrepresented in academic psychiatry. **Hart *et al.*** (pages 639–646) examined gender trends using publication activity in 24 high-impact psychiatry journals from 2008 through 2018. They found an increase over time in the representation of women as both first and last authors, with near parity between female and male authors in the first author position. Relative to men, women showed slower rates of transition to the last author position and remain less represented in the last author position. These results demonstrate improved representation of female authors over the last 10 years but also ongoing challenges in achieving gender parity in academic leadership.

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