

## What the Future Holds

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DSM-5 promises some modifications in diagnostic criteria. A major problem is the classification of children with rages, irritability, and emotional lability. Do these children have bipolar disorder, mood dysregulation, attention-deficit/hyperactivity disorder (ADHD), oppositional conduct disorder/conduct disorder, or a new diagnosis—temper dysregulation disorder with dysphoria? We are still waiting for combination neuropsychological, neuroimaging, and genetic studies to provide validation of a single disorder or multiple disorders currently called juvenile bipolar disorders. The proposed DSM-5 will eliminate Asperger disorder and pervasive developmental disorders and create a single autistic disorder with 2 criteria: social and communication deficits and fixed interests and repetitive behavior.

Treatment issues remain important. Questions have been raised about suicidal ideation from antiepileptic drugs, just as warnings were issued for antidepressants. There has been a significant increase in the use of atypical antipsychotics, particularly in younger children with disruptive behavior. There is a need to balance the benefits of reducing aggression with the cost of weight gain and possibly long-term metabolic disturbances. In this Special Report, the importance of prevention, psychotherapy and counseling, and family involvement is emphasized. We know these interventions can be very helpful, but we need to improve access to treatments and convince payers that these services can be economical over time.

The environment in which children develop is changing. Although there may be positive applications of some new technologies, child and adolescent psychiatrists need to be concerned about the potential harmful effects of screen media, including both television and video games, on vulnerable populations. Early studies are assessing the ability of computerized training programs to improve cognitive skills. Unfortunately, there is a proliferation of untested and unvalidated programs being marketed with promises of making children with ADHD, autism, traumatic brain injury, and learning disorders smarter and academically more successful. Child psychiatrists should demand data

demonstrating efficacy before families and school spend inordinate sums on computerized cognitive training.

Advances in research are providing new techniques for understanding child and adolescent psychopathology. Structural imaging has been enhanced by new techniques, such as diffusion tensor imaging that delineates major neural fiber tracks. Functional MRI can assess cerebral cortical neural activity and is being used routinely by researchers to assess brain function in a variety of childhood disorders. Important progress is being made in the understanding of e-genetics and the gene-environment interaction. There are still no genetic tests for the common childhood psychopathologies, but progress is being made in pharmacogenetics and potential treatments. As an example, new knowledge of the effect of tuberous sclerosis genes on the mammalian target of rapamycin (mTOR) pathway has resulted in a potential therapy using rapamycin, an inhibitor of mTOR, to reduce tumor growth and possibly improve cognitive and behavioral function in children with tuberous sclerosis accompanied by epilepsy, autistic disorder, or intellectual disability.

Encouraging students to consider a career in research and ensuring adequate funding for research are essential for improving the future care of children and adolescents.

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