

Diversity and Challenges of Child Psychiatry

As an organized branch of medicine, the field of child psychiatry has its origins nearly a century ago in the emergence of the child guidance clinic movement as well as in the attempts to reform the juvenile justice system and to understand the needs of children with severe developmental problems (1). As a field it drew heavily on psychiatry as well as pediatrics and psychology, and early great debates, e.g., about the relative roles of nature versus nurture, consumed much time and energy as the focus was largely on broader theoretical issues. Over the past 50 years the emphasis has been much more on empirical research with less emphasis on the role of theory. So, for example, the debate on the role of nature versus nurture has transformed itself into attempts to understand the interaction of all the various influences that shape development and behavior. The diversity and richness of the field at the present time is reflected in several articles in this issue.

The role of trauma in children's development and in the pathogenesis of clinical disorder has been a topic of great historical interest. In this issue two articles are concerned with the reaction of children to traumatic events. Laor and colleagues report on the long-term consequences of children in Israel to exposure to SCUD missile attack. This article, a follow-up of their two earlier reports on the study group, follows the effects of the traumatic experience on various symptoms; it also is concerned with the potential mediating influences provided by the mothers' experience. Greater severity of child symptoms was related both to aspects of the experience itself, e.g., being displaced from the family home, and to poor family function and maternal difficulties. As might be expected, the association between child and maternal symptoms was stronger for the youngest children. Severe posttraumatic symptoms did persist in a subgroup of the study subjects. In their article, Simeon et al. report that childhood interpersonal trauma was highly predictive of depersonalization experience and depersonalization disorder. They also emphasize the importance of focusing on the potential importance of different types of trauma and encourage us to develop a richer conceptualization of emotional maltreatment in the research literature. Both articles bring us back, in some ways, to the roots of child psychiatry and the effects of early experience on later development and behavior; both articles also demonstrate the increasing sophistication of the field and highlight the important ties between children's experience and later disorder.

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Three other articles in this issue are concerned with genetic and neurobiological issues in childhood disorders. This is an area where knowledge has seemed to grow at an exponential rate as attempts are made to relate disorder to underlying genetic or neurobiological mechanisms. Faraone and his co-workers report the results of a meta-analysis of the association between the 7-repeat allele of the dopamine D₄ receptor gene and attention deficit hyperactivity disorder; previous reports have variably noted this association. In their meta-analysis they do find support for this association, albeit not a strong one. Given that genetic effects in complex psychiatric disorders are likely to be mediated by several genes, it is not surprising that associations may be somewhat difficult to detect, making meta-analyses of the kind reported here critical.

Kwon et al. report the results of a functional magnetic resonance imaging study of visuospatial working memory in females with fragile X syndrome. They examined four regions of the cortex that are known to be involved in this effort and found that, as compared to normally developing individuals, those with fragile X have difficulties with the

modulation of activities in the prefrontal and parietal cortexes as the working memory “load” increases. Kwon et al. also demonstrate correlations between brain activation and the expression of the FMR1 gene product. The ability to move from discussions at the level of the gene to neuroimaging and neuropsychological performance is important and reflects the growing excitement about the study of behavioral phenotypes associated with specific genetic vulnerabilities (2).

The growing body of work on brain-behavior relationships is also reflected in the report by Perry et al. of potential abnormalities in cholinergic transmitters in autism. They used autopsy material to examine cholinergic enzyme and receptor activity. Differences between autistic and normal subjects were found in several brain regions, indicating possible abnormalities in this system in autism. As the authors note, the cholinergic system has not previously been the focus of extensive research in autism but is of interest given the role of cholinergic activity in the cortex and hippocampus. This is one of several interesting neurobiological findings in autism, which has a strong genetic component but whose underlying neurobiology remains poorly understood.

These articles reflect the diversity as well as the growing sophistication of research in child psychiatry, where we must be concerned not only with etiological factors that range from society and the family to the gene but also with the interaction of these factors and their impact on the developing child. These articles also are a testament to the challenges facing the field, e.g., the needs to adopt a longitudinal approach, to address the problem of important but elusive gene effects, to relate genes to brain mechanisms and behavior, and to develop new and innovative models of childhood-onset disorders. The increasing complexity and sophistication of this work make integration of findings into clinical work even more difficult and more important.

References

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