

Editorial: Developmental Psychopathology

With the intensifying focus on the proposed revision of the Diagnostic and Statistical Manual (DSM-5) in 2013, the role of development in the conceptualization of psychiatric diagnosis will hopefully gain more recognition. Unfortunately, previous versions of the DSM included only brief considerations of developmental themes.

In the early parts of the last century developmental psychiatry was dominated by so-called “Grand Theories” of development which were derived mainly from philosophy and psychoanalysis. Although the insights from these theories continue to be a rich source for hypothesis building and prospective research, their early promise of explaining all of psychopathology proved disappointing. The “Grand Theories” were replaced, therefore, by painstaking evidence based research which has attacked much smaller issues. However, as this body of study increases in substance, it is becoming increasingly apparent that psychiatrists need to base their clinical work on sound developmental theory. Perhaps the most important landmark for this approach was the publication by Donald Cohen and Dante Cicchetti of their seminal work *Developmental psychopathology: Theory and method* (1). In the introductory presentation of this special issue, Toth and Cicchetti describe the evolution and principles of Developmental Psychopathology and how such principles are fundamental for understanding child psychiatric disorders.

It is our suggestion that one of the major frameworks for the new DSM-5 revision needs to be developmental and thus the publication of the present issue of the Israel Journal of Psychiatry and Related Sciences is extremely timely. This is perhaps even more so as the late Donald Cohen had a major role in the development of this Journal.

It is now well established that most psychiatric disorders have strong genetic predispositions with abnormal brain development trajectories. Two papers in this special issue are devoted to Tourette syndrome and autism, diseases with strong genetic diatheses and a developmental emergence of both psychiatric and neurological symptoms. Despite intensive research, the genetic variants associated with the genetic risk for these neuropsychiatric disorders are as yet uncertain. With advancements in molecular biology and cytogenetics we are now able to screen the whole genome

for the presence of small microdeletions and microduplications collectively termed copy number variations (CNVs). CNVs currently account for the etiology of autism in 10%-20% (2), and there is evidence for the important role of CNVs in other psychiatric disorders, such as schizophrenia (3). Two papers in this special issue focus on microdeletion syndromes – velocardiofacial syndrome and Williams syndrome – associated with unique psychiatric, cognitive and behavioral phenotypes. Velocardiofacial is the most common known genetic risk factor for schizophrenia and Williams syndrome is associated with characteristic deficits in auditory processing and a distinct social phenotype.

Developmental psychopathology is thus an excellent framework for understanding a myriad of psychiatric disorders with distinctive abnormal neurodevelopmental trajectories, such as early onset schizophrenia (reviewed in the special issue by Kinross et al.). It is also a context for understanding extreme behaviors, such as gender identity disorder which according to the review by Schechner is a form of gender behavior which should be understood as a continuum rather than as a dichotomy of normal versus abnormal categories.

Developmental psychopathology is also important for formulations of normal development. Research by Weismann et al. in the current special issue shows how early psychological traits – temperament of children – are strongly associated with development of peer relations and problems with peers.

It is now well recognized that there are sensitive periods in core psychological functions, such as language acquisition. Traumatic events – such as brain injury, or adverse psychosocial events – occurring early in life, may cause life disruptions in language acquisition with more-marked effects on adult functioning than if these same experiences occur later in life (4). According to Pine (4), charting children's ongoing development, as opposed to examining their functioning at any one specific point in time, is the best way to characterize such adverse effects. This reflects the fact that risk for poor outcome is higher among children who show consistent patterns of dysfunction over time than among children who show dysfunction at only one point in time. This suggests a view of psychopathology that highlights a child's failure to undergo

typical, expected changes in behavior and cognition with maturation, or a child's failure to overcome transient perturbations in function.

"Developmental Psychopathology" can be defined as the study of the development of psychological disorders. Developmental psychopathology has the following (non-comprehensive) list of assumptions: 1. Atypical development and typical development are mutually informative. 2. Developmental psychopathology is not the study of pathological development, but the study of the basic mechanisms that cause developmental pathways to diverge toward pathological or typical outcomes. 3. Development leads to either adaptive or maladaptive outcomes and this depends to a great degree on the context in which the developmental process takes place. 4. Many variables influence development and research designs should incorporate multivariate designs to examine the mechanisms underlying development. 5. Development arises from a dynamic interplay of physiological, genetic, social, cognitive, emotional, and cultural influences across time (4).

Developmental Psychopathology thus attempts to understand atypical development in the context of a comparison with typical development. Pathology represents a failure of mature behaviors to appear or immature behaviors to disappear. For example, separation anxiety and stranger anxiety are well established developmental milestones but when they fail to disappear with development their persistence over time accounts for the majority of anxiety disorders seen in adulthood (4). Behavioral inhibition in infants may be a precursor for social anxiety disorders in adulthood and while most toddlers go through a period of intense fears their persistence during adolescence may be quite crippling. Many adolescents go through normal periods of social anxiety especially when meeting unfamiliar peers for the first time and this also has to be differentiated from social anxiety disorder.

Conduct and antisocial disorders is another area where the understanding of their appearance in the context of normal development is all important. Thus conduct disorders appearing de-novo in adolescence in most cases reflect social norms and most such individuals grow up to be useful members of society. Where this aberrant behavior begins in early childhood especially when associated with violence and in a non-group setting the prognosis is extremely poor.

Another area of developmental research which has become increasingly salient in recent years is the area of depression and suicide. It has become increasingly recognized that depression previously thought to be

an adult disease usually has its origin in childhood and adolescence. Interestingly depression becomes more common with the onset of puberty, especially in girls where it is preceded by the onset of a ruminative style of thinking. Suicide attempts and nonsuicidal self injury are highly concentrated in the adolescent period of life whereas suicide leading to death is far more common as adulthood ensues.

The importance of critical periods is now being increasingly recognized. There is accumulating evidence for the existence of a complex bidirectional gene environment interaction in causing psychiatric disorders, which is the topic of the review by Schlossberg et al. in this special issue. Epigenetics may lead to an understanding of how environment at a critical stage of development may impinge on gene structure and produce cross generational effects. These developmental influences sculpt the development of the brain circuitry devoted to processing danger and have been linked to developmental manifestations of clinically-significant anxiety (5).

While such advances are unlikely to impact current conceptualizations contained in DSM-5, their reverberating influences are likely to exert increasingly profound effects in future years. The list of examples of research based on the principles of developmental psychopathology is obviously infinite. In this issue we will try to highlight just some detailed illustrations of the importance of developmental psychopathology for our field in the hope that our issue will have some influence both on DSM-5 and perhaps even on DSM-6!

References

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