CHAPTER 14

Increasing the Developmental Focus in DSM-V: Broad Issues and Specific Potential Applications in Anxiety

Daniel S. Pine, M.D., E. Jane Costello, Ph.D., Ron Dahl, M.D., Regina James, M.D., James Leckman, M.D., Ellen Leibenluft, M.D., Rachel G. Klein, Ph.D., Judith Rapoport, M.D., David Shaffer, M.D., Eric Taylor, M.D., Charles Zeanah, M.D.

Introduction

As work on the fifth edition of the Diagnostic and Statistical Manual (DSM-V) progresses, discussions are intensifying concerning the need to implement major changes to nosology (Hyman 2007; Shear et al. 2007). This chapter considers procedures for implementing one set of potentially major changes that would increase focus on developmental themes.

We begin by delineating findings that have emerged since publication of DSM-IV (American Psychiatric Association 1994), which suggest a need to increase our focus on development in standard nomenclatures. This research consolidates a view of many mental syndromes, prevalent at various stages of life as disorders, with pathophysiologic processes identifiable in childhood.

Following this brief review, we then describe three specific proposals for increasing a focus

on developmental themes in DSM-V, relative to DSM-IV.

1. We first propose a manner in which revisions to the text sections of DSM-IV might increase a focus on development.
2. In a more significant change than above, we propose procedures for integrating explicit descriptions of *developmental manifestations* into DSM-V, by including these descriptions as part of criteria for each mental disorder.
3. We describe procedures for considering and evaluating *developmental sub-types* of disorders.

Each of these proposed revisions is relatively complex, and the support for each varies as a function of individual-disorder features. As a result, the revisions are not mutually exclusive; DSM-V could incorporate any combination of the three, and different proposals may work better for one or another specific disorder. In this chapter, we maintain a primary focus on anxiety disorders – to exemplify procedures applicable to all mental disorders – with other disorders considered to illustrate specific points. Thus, we specifically review research emphasizing the importance of developmental perspectives on anxiety disorders, to illustrate the broader importance of development in mental disorders. Moreover, we also describe potential changes in text, possible age-related manifestations, and proposals for age-related sub-types, specifically for anxiety disorders. Finally, these descriptions focus on specific anxiety disorders as narrowly as possible.

Obsessive compulsive disorder (OCD) and post-traumatic stress disorder (PTSD) can be differentiated from other anxiety disorders (Pine 2007). For example, children presenting for treatment of anxiety can be divided, based on patterns of comorbidity, into three groups: OCD,

PTSD, and other anxiety disorders (March et al. 1998; RUPP 2001; Pine and Cohen 2002). Studies of neurobiology and familial aggregation support a similar three-group division, where the correlates of OCD, PTSD, and other pediatric anxiety disorders appear to differ (Rosenberg and Hanna 2000; De Bellis 2001; Pine 2007). Given a narrow focus on particular conditions in this chapter, our specific examples primarily draw on data for particular anxiety disorders. In children and adolescents presenting for treatment, these anxiety disorders primarily comprise social anxiety disorder/social phobia (SoPH), separation anxiety disorder (SAD), and generalized anxiety disorder (GAD).

Emergence of Developmental Perspectives

Many changes in conceptualizations of mental disorders have emerged since revisions to the psychiatric nosology in the early 1980s, with publication of: 1) DSM-III in 1980 (American Psychiatric Association 1980), followed by two subsequent revisions, 2) DSM-III-R in 1987 (American Psychiatric Association 1987), and 3) DSM-IV in 1994. However, few changes have been as dramatic as those associated with an increasing emphasis on development have. DSM-III contained a relatively brief consideration of developmental themes, and the extent of this focus did not change appreciably in DSM-III-R or DSM-IV (Pine 2002b). In the meantime, advances in research led to radical re-sculpting of developmental perspectives, leaving DSM-IV somewhat out-of-step with the current research base. This creates a need to increase the focus on development in DSM-V, markedly.

In considering a broad perspective on mental illnesses, four areas of research emphasize the importance of development: 1) clinical presentation, 2) natural history, 3) developmental

psychopathology, and 4) age-at-onset. As noted above, to provide concrete examples, we focus in this chapter on anxiety, viewed developmentally. However, where particularly important data or major questions arise, we also discuss data in other areas.

Clinical Presentation

With the creation of disorder-specific criteria in DSM-III, attention began to focus on application to children, including children with anxiety disorders and related conditions, such as mood disorders (Costello et al. 2002). This attention alerted clinicians to the fact that differences in symptoms, or core features, of disorders often vary as a function of development. For example, in the anxiety disorders, most research on therapeutics in adults targets patients who present with relatively specific forms of anxiety disorders, such as panic disorder, GAD, or SoPH. Early attempts to conduct comparable studies in youths confronted the fact that children and adolescents typically present with more-varied collections of anxiety symptoms encompassing several so-called specific disorders, such as SoPH, SAD, and GAD. As a result, considerable research on therapeutics in pediatric anxiety disorders, unlike in adults, targeted patients presenting with various combinations of anxiety, as opposed to one or another narrowly defined anxiety disorder (RUPP 2001; Pine 2002a).

Clinicians need to be familiar with the varied ways in which development can affect the presentation of many disorders, beyond the anxiety disorders. DSM-IV also emphasized the role of impairment in psychopathology, but this edition does not discuss, in sufficient depth, the fact that patterns of impairment, much like symptoms, also can manifest in different ways, at different ages. Changes in their environments can moderate levels of impairment in children,

particularly when they are young. For example, for two children with identical biologically based predispositions to fear dogs, impairment can be quite different, if family circumstances force only one of these children consistently to be in the presence of dogs. Children's dependence on adults often forces them to confront situations, such as these, that older, more-independent anxious individuals can choose to avoid. This leads to age-related differences in manifestations of impairment. As with developmental variations in symptomatic presentation, DSM-V needs to consider developmental changes in manifestations of impairment.

Natural History

The creation of standard disorder-specific criteria in DSM-III set the stage for longitudinal research documenting the natural history of mental conditions. Perhaps more than any other advance, research following children as they matured called attention to the importance of developmental conceptualizations. Thus, research has linked virtually all forms of adult psychopathology to earlier manifestations of mental illness observable during childhood. This applies to research on the pediatric anxiety disorders (Pine et al. 1998; Costello et al. 2002; Beesdo et al. 2007). Family studies also extend these findings by demonstrating an association between mental disorders manifest across generations.

As with chronic medical illness, such as cardiovascular disease, data on anxiety disorders and other mental syndromes emphasize the importance of probabilistic perspectives and a focus on prevention. Thus, early problems with anxiety constrain patterns of function during adulthood and predict a statistically increased risk for later problems, but they do not *invariably* predict a chronic, unrelenting pattern of illness from childhood into adulthood (Pine et al. 1998). The

increased risk of anxious children is statistical and probabilistic, not deterministic: while pediatric anxiety disorders precede most adult mood and anxiety disorders, pediatric anxiety disorders are highly prevalent, and they usually remit. However, a minority of children with persistent anxiety mature to account for most adults with mood and anxiety disorders.

Developmental Psychopathology

Formulations of mental illness have long recognized the salience of critical or sensitive periods, stages of development where influences of the environment can appear particularly robust. These formulations resonate with views of normal development that also demonstrate a role for sensitive periods in core psychological functions, such as language acquisition. Particular experiences – such as brain injury, or changes in the social environment – that cause early-life disruptions in language acquisition have more-marked effects on adult functioning than if these same experiences occur later in life. Moreover, 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 (Pine et al. 1998; Costello et al. 2002). This suggests a view of psychopathology that highlights, as abnormal, 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. To understand mental illness, one needs to understand normal changes in development.

The developmental-psychopathology perspective emphasizes the need to understand typical

development, when considering one, or another, behavioral profile as atypical. This theoretical school recognizes the importance of understanding mental illnesses as failures in maturation, whereby pathology can either reflect a failure of mature behaviors to unfold or of immature behaviors to vanish. Thus, applied to the anxiety disorders, periods of intensified fear represent a normal stage of development, across virtually all cultures, where children manifest stereotypical fears at specific ages, such as an early emerging fear of separation in toddlers and an adolescent emergence of social fear, particularly when meeting unfamiliar peers (Ollendick et al. 1996). We can view anxiety disorders as exaggerated forms of these typical fears or as failed extinctions of the fears during development.

A focus on critical periods has intensified, in light of recent breakthroughs. These advances have stimulated new ways of understanding evolving individual differences in thought and behavior, through a focus on genomic features and their interactions with the environment (Meaney 2001; Rutter et al. 2006). Research on anxiety specifically demonstrates how genetic and environmental influences sculpt the development of the brain circuitry devoted to processing danger; these developmental effects have been linked to developmental manifestations of clinically-significant anxiety (Pine 2007). While such advances are likely to impact current conceptualizations contained in DSM-V, their reverberating influences are likely to exert increasingly profound effects in future years.

Age-at-Onset

One set of questions, emerging in light of recent developmental research, concerns the degree to which age-at-onset moderates the presentation of mental illnesses. Perhaps the most compelling

theme in research on this issue focuses on conduct problems in children. Here, a growing consensus suggests that problems, which emerge early, identify a unique subgroup, with particularly malignant conditions distinct from those whose problems first manifest later in development (Moffitt et al. 2002). These findings raise broader questions on the degree to which other conditions in DSM-V, contained under a single mental-disorder heading, identify heterogeneous collection and could be parsed, based on age-at-onset.

Integrating Developmental Data Into Text Revisions

A careful revision of disorder-associated text probably represents the easiest way to increase the focus on development in the DSM. DSM-IV contains text discussions of developmental themes. However, this text often includes discussions of development under the same headings as features related to culture and gender. Clearly, separate text sections specifically focused on development would call increasing attention to developmental themes.

What type of material could be included in text sections focused on development? In terms of the three anxiety disorders described illustratively in this chapter, a few potential organizational principles emerge. First, text sections on developmental conceptualizations should alert clinicians to the changing clinical manifestations of specific syndromes. For example, the section on SAD could describe clues for differentiating normal separation anxiety from separation anxiety disorder. This could include descriptions of the age at which typical separation anxiety disappears and summaries of situations where impairing separation anxiety disrupts normal function. Similarly, the text on SoPH could describe normal adolescent increases in social anxiety and provide clues for differentiating such normal adolescent fluctuations in

social fears from impairing social anxiety. The text on GAD could differentiate normal from abnormal age-related worries.

Second, text sections should review data on natural course. Thus, as noted above, considerable data document the long-term outcome of anxiety disorders in children and adolescents (Pine et al. 1998; Beesdo et al. 2007; Gregory et al. 2007; Moffitt et al. 2007a). These data provide important clues about points during the course of a child or adolescent's disorder when the clinician might expect a level of stability, improvement, or deterioration. For example, text should note that risk for major depression increases in adolescence, particularly among girls, and that clinicians should be aware of particularly high risks in girls with a history of an anxiety disorder. Data on associations between anxiety in children or adolescents and psychopathology in their parents might also be contained within text revisions. Much like data on natural history, data on parent-child associations serve to alert clinicians to the fact that pediatric anxiety disorders exhibit associations with adult mood and anxiety disorders. These associations manifest both in the same child followed longitudinally into adulthood and in the child's parents, who face high risks for mood and anxiety disorders.

Finally, text revisions might call attention to associated features that manifest at specific points in development. For example, an increasing focus on developmental themes has called attention to ever-increasingly early manifestations of psychopathology. In terms of the anxiety disorders, this includes a focus on the temperamental antecedents of frank anxiety disorders. The term "behavioral inhibition" has been used to describe a group of toddlers and preschoolers who manifest extreme shyness and wariness when confronted with novelty, particularly social novelty (Kagan 1994; Fox et al. 2005). Because it is not associated with clinically significant distress or impairment, we do not consider behavioral inhibition an anxiety disorder, per se, but rather, a

risk factor for later anxiety disorders, particularly SoPH, based on longitudinal and family-based data (Schwartz et al. 1999; Rosenbaum et al. 2000). Calling attention to this research in the text for SoPH could alert clinicians to early sub-clinical manifestations of overt anxiety disorders, increasing a focus more broadly on development, as well as on associated themes, such as prevention. Other research, focused on risk factors or disorder-related correlates, beyond early-childhood behavior, could be similarly important. For example, considerable prospective work implicates adverse life events – particularly when they occur at key developmental stages – in a range of pediatric mental syndromes, including anxiety disorders, particularly GAD (Pine et al. 2002a; Moffitt et al. 2007a). Again, describing this work in DSM-V text for specific disorders could increase clinicians' attention to important, potentially modifiable risk factors or to groups of children facing high risk for future disorders.

Age-Related Manifestations

Beyond Text Revisions: Is There a Need for Major Changes?

Text revisions surely will increase focus on development to a degree, but the impact of text revisions alone is likely to be no more than moderate on clinicians' thoughts and practices. This reflects the limited evidence of any marked impact on clinical thinking, following a text revision to DSM-IV in 2000 (DSM-IV-TR; American Psychiatric Association 2000). Thus, text revisions might have less impact than is warranted by recent research findings regarding developmental conceptualizations of mental illness. We should consider more-extensive, major changes for DSM-V.

One major issue, in the context of considering a potentially broad reorganization of DSM-V, concerns the placement of individual disorders that are highly prevalent during childhood. In DSM-IV, disorders we have long recognized as manifesting during childhood are placed in a separate category, "Disorders Usually First Diagnosed in Infancy, Childhood or Adolescence." For the anxiety disorders, this includes only separation anxiety disorder (SAD) in DSM-IV, though avoidant disorder and overanxious disorder also appeared in DSM-III and DSM-III-R. In one sense, retention of this broad category in DSM-V would maintain a focus on at least some disorders viewed from developmental perspectives. However, research during the past two decades suggests that developmental conceptualizations extend far beyond the disorders encompassed in this explicitly developmental category. Thus, we also should consider eliminating this DSM-IV category and, instead, replacing it by increasing the focus on developmental themes in many, if not all, of the conditions listed in DSM-V.

Three DSM-V Work Groups focus on development, comprising one group focused on overarching issues, a second on disruptive behavior disorders, and a third on autism-spectrum and learning disorders. These three groups have begun to discuss the advantages and disadvantages of eliminating or retaining a separate category of developmental disorders in DSM-V. The main advantage stems from the opportunity to increase attention to the developmental features of many conditions, beyond those currently viewed as developmental. This might occur if many other disorders in DSM-V – beyond those classified in DSM-IV as usually diagnosed in infancy, childhood, or adolescence – included a prominent developmental focus. For example, major depression does not appear in the section on conditions manifest in infancy, childhood, or adolescence. Yet, recent and current research, increasingly, is demonstrating that major depression typically arises in adolescence. DSM-V could better

acknowledge this fact. Such a broadening of a focus on development would be consistent with research emphasizing the broad applicability of developmental perspectives in many disorders, such as major depression.

The main disadvantage with such broadening relates to the possibility of unintentionally reducing a focus on development. A separate category in DSM-IV focused on development represents the place where developmental perspectives appear most prominently. At this stage, Work Group members appear willing only to consider eliminating the category, "Disorders Usually First Diagnosed in Infancy, Childhood or Adolescence," if other major changes in DSM-V increase the focus on development in a range of disorders. Moreover, even in this instance, it still may be advantageous to retain the category to insure at least as strong a focus on development in DSM-V as exists in DSM-IV.

Defining Age-Related Manifestations

Another way to increase the focus on development in DSM-V would involve including sections that illustrate how a particular criterion might manifest at different ages. These novel sections, termed "age-related manifestations," could appear, not only in text, but also alongside criteria, thus emphasizing their importance. DSM-V could provide this feature for all disorders, basing inclusions upon general clinical support, as opposed to a systematic review of data. Even for disorders where no such support emerges, a statement to this effect could still be included in the relevant DSM-V disorder criteria set, to facilitate a focus on developmental aspects for all mental disorders.

DSM-IV subtly implies the existence of developmental manifestations, mostly in text

sections, but also in a few isolated instances where disorder-specific criteria refer to developmental features. For example, the DSM-IV text on attention-deficit/hyperactivity disorder (ADHD) notes that symptoms become less conspicuous as children mature, even noting that adult manifestations may involve feelings of restlessness, as opposed to overt hyperactivity observable to others. Similarly, some ADHD criteria include age-sensitive examples, by referring to schoolwork. A major change for DSM-V could involve more explicit, detailed, and in-depth discussion of age-related manifestations, across virtually all families of mental disorders.

It is important to distinguish so-called "age-related *manifestations*" of mental disorders from "age-related *subtypes,*" as will be discussed in the next section of this chapter. For age-related manifestations, identical criteria indicate distinct age-related manifestations of each particular symptom. Age-related manifestations identify developmentally unique presentations of one or another clinical feature that characterizes the same underlying construct at distinct points in development; these manifestations represent examples of symptomatic expressions at different ages, placed alongside criteria. Age-related subtypes, in contrast, identify unique forms of disorders. As such, they refer to clinical presentations at specific ages that differ fundamentally, in terms of the associated validating features, across age groups. Moreover, whereas age-related manifestations could occur for most, if not all, disorders, based on clinical supporting evidence, age-related subtypes should occur only for disorders where strong support emerges, based on systematic evidence of their occurrence and validity. Thus, while both age-related constructs increase a focus on development in DSM-V, the change in developmental focus from DSM-IV to DSM-V will be broader across disorders, due to additions of age-related manifestations, as opposed to age-related features.

Applications in Anxiety

In terms of potential age-related manifestations of anxiety disorders, available data on SoPH provide clues for potential revisions, whereby DSM-V might express age-related manifestations in three specific ways.

1. DSM-V could give age-sensitive examples for particular criteria. Thus, criterion A for SoPH calls for a "marked and persistent fear of one or more social or performance situations." Major changes occur with development, in terms of the types of exposures of individuals where social anxiety might manifest. Age-related manifestations might describe specific instances where aspects of age-specific situations commonly precipitate anxiety, to assist clinicians in correctly identifying SoPH at particular development periods. For example, text might suggest that SoPH manifests in young children, when they attend birthday parties or mak presentations at school, but that it manifests in adults when they are required to make oral presentations at work.
2. DSM-V could more explicitly link some disorder-specific criteria to designations of developmentally appropriate behaviors, so that clinicians can better appreciate the differences between typical and atypical development. The manual could note some explicit reference to increases in anxiety during adolescence in SoPH criterion A – which describes marked, persistent fear of social situations – alongside descriptions of features that differentiate appropriate from inappropriate increases in social anxiety during adolescence. Criterion A goes on to note that children must manifest the capacity for age-appropriate

social relationships and manifest anxiety in peer settings; it could provide richer descriptions of these developmental features. DSM-V also could revise Criterion B, which notes that exposure to social situations almost invariably provokes anxiety, to note the varied ways in which exposure to feared situations might lead to anxiety provocation, manifest in unique ways across development. For example, while adolescents may talk about the specific aspects of social situations they most fear, younger children may present only with a pattern of avoidance, when confronted with specific scenarios, such as oral presentations in school or other group settings.

3. Finally, developers of DSM-V should consider delineating features of conditions where there is evidence of age-related changes in a high proportion of cases. For example, again considering SoPH, symptoms of selective mutism can be a manifestation of extreme social anxiety in young children; however, this symptom is relatively rare in older children. Thus, explicit reference to this developmental feature could be included when describing age-related manifestations of pathologic social anxiety in specific situations.

Similar opportunities abound for the other anxiety disorders, including SAD and GAD. As with SoPH, DSM-V could incorporate age-related manifestations by focusing on how specific criteria manifest in distinct age groups. In SAD, for example, age-related manifestations could reflect the increasing emphasis placed on independent activities as children transition towards adolescence. Young children spend more time with parents than do older children and adolescents. Hence, opportunities for separation may manifest in different scenarios. A young child may manifest severe separation anxiety when initiating first grade, an older child when leaving for sleep-away camp, and a late adolescent when leaving for college. Similarly,

considerable data document robust decreases in SAD prevalence, as reflected in the DSM-IV text. DSM-V might specifically mention this feature as an age-related manifestation, perhaps to call clinicians' attention to the fact that relatively few SAD cases persist into adolescence.

Age-Related Disorder Subtypes

Defining Age-Related Subtypes

The inclusion of age-related subtypes in DSM-V might augment both text revisions and the specifications of age-related manifestations. Age-related disorder subtypes differ from age-related manifestations, in crucial respects. Namely, age-related disorder subtypes will only appear for isolated conditions, where strong support emerges for inclusion based on systematic evidence for their occurrence and validity. The example of DSM-IV conduct disorder provides a framework for evaluating such systematic evidence.

Conduct Disorder: The Prototypic Example

Conduct disorder represents the prototypic condition in DSM-IV where data exist to support the validity of an age-related subtype. Thus, considerable research demonstrates meaningful distinctions between individuals who first manifest significant conduct problems before age 10 years and individuals who only manifest such problems at later developmental stages. This includes data on longitudinal outcome, familial aggregation, associated risk factors, and neuropsychological profiles (Moffitt et al. 2002). While few randomized controlled trials directly

compare treatment responses in individuals with early- versus late-onset varieties of conduct disorder, the two forms also may differ in terms of treatment response, based on differences in long-term prognosis from naturalistic studies. As such, early- and late-onset varieties of conduct disorder are likely to be distinct pathophysiologic conditions, despite the fact that DSM-IV identifies them with identical criteria. The case of conduct disorder provides a prototypical example, against which other age-related subtypes to be added to DSM-V should be considered. Thus, DSM-V should consider age-related subtypes in instances, like conduct disorder, where a fundamental aspect of a clinical syndrome is likely to differ, as a function of age-at-onset. Moreover, support for inclusion of a new subtype requires data on a range of external validators, such as those examined for early- and late-onset conduct disorder.

Examples from Anxiety

DSM-V might consider two types of age-related subtypes. One type is analogous to the example of conduct disorder. This concerns instances where criteria are identical across age groups but where these criteria appear to identify conditions that exhibit meaningful differences in pathophysiology. Again, conduct disorder represents the best example of disorders considered distinct, based on a broad pattern of results from a series of external validators. In terms of anxiety disorders, probably the strongest data on this form of age-related subtype emerges for OCD, which, like PTSD, we do not consider otherwise in this chapter. Here, data document age-related differences in comorbidity with tic disorders, as well as gender ratios or other risk factors that suggest distinctions in pathophysiology between early- and late-onset forms of the condition. In terms of the three anxiety disorders that form the focus of this chapter, less research suggests

the utility of this form of age-related subtype than for PTSD or OCD. Nevertheless, some evidence suggests considering the utility of developmental sub-types of SAD, as they relate to panic disorder. As noted above, DSM-IV implicitly recognizes the heterogeneity in SAD by calling attention to the strong associations with age. SAD relates to panic disorder in family-based, longitudinal, and physiology studies (Pine and Klein 2008). Longitudinal and family-based data suggest that SAD, specifically manifest relatively late in development, may show a particularly strong relationship to panic disorder (Bruckl et al. 2007; Nocon et al. 2008; Wittchen et al. 2008).

The second variant of age-related subtypes applies to conditions where criteria differ in distinct age groups for conditions considered "the same," from the perspective of pathophysiology. Probably the closest example in DSM-IV pertains to GAD, where three "associated features," such as irritability, sleep disturbance, or muscle tension, are required to fulfill criterion C in adults, but only one such associated feature is required in children. Without question, such a subtle distinction in only one criterion represents a less-dramatic instance of an age-related subtype, relative to potential changes for other disorders, where a large proportion of criteria might differ, as a function of age. For example, for PTSD, data suggest that manifestations of the same underlying syndrome can be quite different in young children, relative to adults, calling for the use of quite different criteria at different ages. Thus, if data support the validity of these differences, PTSD would represent an instance of an age-related subtype, where different criteria identify conditions viewed as alternative manifestations of the same underlying syndrome, with distinct symptomatic expressions at specific ages. Nevertheless, the example of GAD, while less dramatic, also is illustrative as it does represent an instance where criteria in DSM-IV already diverge, as a function of age group.

As delineated above, two forms of age-related subtypes exist: one characterized by similar symptoms, with distinct validators, and the other by different symptoms but similar validators. Beyond such age-related subtypes of disorders, other aspects of discussion on subtypes among members of the DSM-V Task Force emphasize the importance of incorporating perspectives from prevention into nosology. Hence, some members suggest the potential usefulness, as part of an increasing focus on dimensional perspectives, of calling attention to early, sub-clinical symptomatic presentations of disorders. Some people have conceptualized these presentations, on occasion, as prodromal forms of specific DSM-IV disorders.

Probably the most extensive research considers the utility of the so-called "schizophrenia" prodrome. Any consideration of including criteria for sub-clinical entities as part of a broader focus on development in DSM-V should begin by considering the utility of creating a "schizophrenia prodrome" before considering other prodromes. In-depth discussion of the advantages and disadvantages of this issue is beyond the scope of this chapter with its focus on anxiety. However, as with other age-related subtypes, the threshold for adding any prodrome, including one for schizophrenia, should be very high, in terms of data demonstrating validity and clinical utility. Moreover, these discussions should consider the possible disadvantages associated with calling attention to prodromal forms of disorders. For example, one can imagine many situations where families could become quite distressed when being told that one or another set of behaviors predicts high risk for serious life-altering conditions, such as schizophrenia. This could be particularly distressing because the meaning of "high-risk," in this context, refers to a relative increase over the risk in the population at-large, but not a high absolute risk (e.g., less than 50% chance of developing the full-blown syndrome).

In terms of prodromal forms of anxiety, behavioral inhibition emerges as the one phenotype

where some discussion seems worthwhile. As noted above, both family-based and longitudinal studies show an association between early-childhood behavioral inhibition and adolescent or adult anxiety disorders manifest either in children followed prospectively or in their parents. Similarly, brain imaging studies document strong parallels in the underlying physiologic correlates of behavioral inhibition and anxiety disorders (Pérez-Edgar 2007).

In considering a specific "behavioral inhibition" prodrome as a phenomenon to be included in DSM-V, two key features arise. First, as with the schizophrenia prodrome, questions arise on weighing advantages associated with improved prevention and identification against potential adverse unintended consequences. The latter might emerge when the field calls attention to normal variations in temperament as associated features of psychopathology. Very high rates of anxiety-disorder diagnosis in children and adolescents already raise questions on the degree to which current diagnostic criteria blur the boundaries between normal behavioral variation and frank pathology, thus trivializing severe clinical problems (Shaffer et al. 1996; Kessler et al. 2005). Expanding the range of conditions categorized in DSM-V to encompass normal variations in temperament, even if they are associated with mental illnesses, would be likely to increase the force of such questions.

Second, we should consider the incremental utility for the clinician of adding such categories, given both methodological and theoretical differences between the construct of temperament and that of anxiety disorders. From a methodological standpoint, behavior inhibition typically is identified using direct-observation measures and clinical settings do not frequently employ such measures; complications are likely to arise when trying to integrate these measures into the clinic. From a theoretical perspective, research studies on anxiety disorders and on temperament both attempt to identify behavioral extremes associated with children's

responses to threats. The degree to which researchers in both areas identify truly distinct, or overlapping, constructs remains unclear because there has been insufficient research examining incremental validity, and assessing both constructs in the same group of children, in samples with clinically significant anxiety.

Conclusions

In this chapter, we have undertaken to delineate particularly pressing issues related to increasing developmental themes, through revisions from DSM-IV to DSM-V. While we call most attention to specific changes in the anxiety disorders, these specific changes relate, more comprehensively, to a systematic series of broader changes throughout the nosology. It will be necessary to evaluate the advantages and disadvantages of each specific change, for each condition in DSM-V.

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