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Internalizing Disorders in Early Childhood: A Review of Depressive and Anxiety Disorders

Mini Tandon, DO*, Emma Cardeli, AB, and Joan Luby, MD

Department of Psychiatry, Washington University School of Medicine, Campus Box 8134, 660 South Euclid, St. Louis, MO 63110, USA

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The understanding of internalizing disorders in young children has lagged behind advances in our understanding of other areas of psychopathology in this age group. One factor contributing to the relatively slower progress in this domain might be that, as a group, internalizing disorders tend to be viewed as less problematic by parents, teachers, and other caregivers. This may be related to the fact that such disorders are most often characterized by quiet, internal distress sometimes referred to as “intropunitive,” rather than overtly, socially negative, or disruptive behavior. Such features may also make these disorders more difficult to detect in the very young who have less well-developed verbal skills in general and specifically an even more limited capacity to describe internal feeling states.

Despite these impediments, a major shift, and advance in this area, has been the study of more discrete differentiated disorders instead of lumping of all internalizing symptoms into one broad category of the two-dimensional internalizing versus externalizing taxonomy of childhood psychopathology. This shift in the conceptualization and categorization of psychopathology, although still an area of considerable debate, has allowed systematic investigation of diagnostic nosologic classifications used in older children and adults and has contributed to our understanding of the differentiation between mood and anxiety disorders in early childhood and differences between preschoolers and school-age children. In older children, some investigations have provided data that dispute this distinction, suggesting that some anxiety disorders (eg, generalized anxiety disorder) should be categorized with major depressive disorder (MDD).^{1,2} However, several investigations in young children have supported a meaningful distinction between mood and anxiety disorders in general.^{3,4} The question of whether to lump or split mood and anxiety disorders, and how to split them in early childhood, remains a relatively empirically unexplored area in need of further study.

The shift to a categorical and more differentiated view of mood and anxiety disorders in early childhood has also created a gap in our ability to link this newer literature to the large and rich older body of literature on young children that used these broader dimensional measures of psychopathology.^{5–7} As in other areas of young child psychopathology, the recent development of age-appropriate measures of psychopathology has catalyzed this area of research, with findings moving beyond the traditional two-dimensional taxonomy as offered by the widely used Child Behavior Checklist (CBCL). In addition to the

development of new diagnostic measures (in the article by Egger and colleagues, elsewhere this issue), another important advance has been the application of methodologies integral to the assessment of developmental and clinical psychopathology research in young children. This includes the use of observational measures as well as semiprojective or narrative measures and age-adapted (eg, puppet based) interview approaches. Such methods, although potentially elucidating to all forms of early psychopathology, are particularly important for internalizing disorders, where understanding the young child's internal emotional experience is critical to recognizing symptoms.

The Diagnostic and Statistical Manual of Mental Disorders (DSM) taxonomy has included a distinction between mood and anxiety disorders in all of its iterations to date. Since a new iteration of the DSM system is in development, some have argued that mood and anxiety disorders should be lumped across the age span.⁸ However, given the well-established need for developmentally sensitive distinctions in this domain,⁹ how this applies, or fails to apply, to young children remains unclear and understudied. This issue is an important step toward advancing the treatment of these disorders in early childhood, because it is necessary to have a clear and well-validated nosology before age-appropriate treatments can be designed and tested. A challenge common to diagnosis of any disorder in preschoolers, and highly pertinent to anxiety disorders, remains the limited ability of the child to articulate his or her own internal emotional states reliably. The American Academy of Child And Adolescent Psychiatry Work Group on Research has developed Research Diagnostic Criteria-Preschool Age (RDC-PA)¹⁰ to address such quandaries in diagnosis in this age group. Pertinent to anxiety disorders, the group suggested, for example, modification of criteria so that emphasis would be placed on behavioral *observation* of withdrawal in social situations rather than expressed anxieties. Research examining the validity of these modified criteria for use in the preschool period is inconclusive and ongoing.¹¹

Another diagnostic dilemma is the appropriateness of the duration criteria as currently required in DSM-IV for preschoolers. For example, the requirement that social phobia (SP) must persist for at least 6 months may exclude a young child with these symptoms who is significantly impaired.¹²⁻¹³ For preschoolers, 6 months is an extremely long period of time, representing a high proportion of their lifespan, and, thus, perhaps a developmentally inappropriate criterion. More longitudinal research examining samples of preschoolers with anxiety symptoms is warranted to clarify such diagnostic ambiguities.

Toward this end, this article reviews the current empiric and descriptive database on the nosology and treatment of mood and anxiety disorders in young children, identifying advances and areas in which future studies are needed.

THE BROAD DIMENSION OF INTERNALIZING PSYCHOPATHOLOGY

Although externalizing disorders have received considerably more attention in preschool research in the past, the literature examining internalizing disorders and the pathways that connect the two is a recent development.^{9,14-17} Empiric research supports the distinction between these 2 broad categories even as early as infancy.¹⁸ Longitudinal investigations have described the stability of internalizing symptoms even when identified as early as infancy. For example, Briggs-Gowan and colleagues¹⁹ found 1-year internalizing symptom persistence rates of 37.8% in a general population-based birth cohort of toddlers aged 1 to 3 years, and no significant gender differences were found. Preschoolers with internalizing disorders assessed in a general population cohort at ages 2 and 3 years have 3 times the risk for similar internalizing psychopathology 8 years later based on parent interview.¹⁶ Toddler twin studies suggest that genetic factors account for 50% of the variance and shared environment for about 30% of the variance in the internalizing scales of the Infant Toddler

Social and Emotional Assessment.^{20,21} More recent literature has shown that internalizing children were more prone to sadness and less impulsive compared with those with externalizing disorders in a study of emotionality and “effortful control” as a form of regulation in 4- to 8-year-old children.¹⁴ High levels of effortful control (the ability to suppress a dominant response in favor of exhibiting a less dominant response) appear to be associated with *internalizing* symptoms, or apparent overcontrol, whereas low levels of effortful control are associated with *externalizing* symptoms. Moderate levels of effortful control are associated with more adaptive regulation.^{22,23} Consistent with less impulsivity, these children appear behaviorally inhibited, constrained, and prone to internalizing symptoms such as anxiety.^{14,24}

Because of the self-directed nature of internalizing symptoms, patterns of reported internalizing symptoms vary by reporter. Longitudinal studies using multiple informants have suggested that fathers’ reporting of internalizing symptoms in a child at age 3 years significantly predicted similar symptoms at age 5 years.²⁵ Other studies have suggested that parents’ report, as opposed to teacher report, of internalizing symptoms may better predict observed, internalizing play behavior among preschoolers.⁶

Diagnostic outcomes in internalizing disorders have also been shown to be heterogeneous, and this may be related to the complex comorbidities that can go undetected in the assessment of young children. Along this line, internalizing disorders co-occur with themselves and with externalizing disorders more often than chance would predict.^{26,27}

DEPRESSIVE DISORDERS

Major Depressive Disorder

Throughout history, the application of psychiatric diagnoses to preschool-aged children (aged 3–6 years) has been met with a great deal of skepticism and, in some cases, opposition. Diagnoses of clinical depression, in particular, have caused considerable unease. In the 1940s, Spitz provided compelling case reports of depressed affect in infants between the ages of 12 and 18 months.²⁸ Surprisingly however, there was little investigation of mood disorders in young children for decades after these observations were published. Theoretical literature subsequently refuted the idea that young children were capable of demonstrating depressed affect, believing that preschoolers were too immature to experience complex emotions, such as grief and melancholy.²⁹ Recent empiric data have disproved this claim, demonstrating that infants and toddlers exhibit a higher level of emotional sophistication than previously recognized.^{30,31} Nonetheless, the study of preschool depression remained latent until the 1980s when Kashani and colleagues^{32–37} provided evidentiary support for depression in the preschool period. Looking at a sample of schoolchildren in both clinical and community settings, Kashani and colleagues were able to identify a subgroup of preschoolers who met standard DSM-III criteria for MDD. Yet due to the fact that a portion of the sample failed to meet diagnostic criteria although they displayed clinically relevant symptoms,³⁴ this study raised questions about the use of standard diagnostic criteria, identifying the need for specific, developmentally appropriate diagnostic criteria for application to preschool-aged children.

The recently published “Diagnostic Classification of Mental Health and Development Disorders in Infancy and Early Childhood-Revised” aimed to provide symptom descriptions of depression as they manifest in early childhood.³⁸ In 2003, the American Academy of Child and Adolescent Psychiatry task force also proposed revisions of DSM criteria for use in future research on preschool psychopathology.¹⁰ Where possible, the task force used empiric evidence to inform the modifications. Preliminary research by Luby and colleagues³⁹ guided the amendments concerning MDD, which included the addition of a

new symptom, “persistent engagement in activities or play themes with death or suicide.” Luby’s work additionally provided evidence that a stable and specific depressive symptom constellation may develop in preschool children aged 3 years to 5 years and 6 months.³⁹

In a controlled study of preschool depression, Luby and colleagues³⁹ assessed the validity of developmentally translated standard DSM-IV symptoms using a modified version of the Diagnostic Interview Schedule for Children, IV-Young Child (DISC-IV-YC).⁴⁰ These modifications included queries on “activities and play” rather than schoolwork, as preschoolers have limited exposure to conventional academic settings; the use of terms such as “sad and unhappy” in the place of “sad and depressed” to better reflect parents’ perceptions of their child’s mood states; and the framing of questions regarding “preoccupation with death themes and suicidality” around themes of play to account for young children’s limited direct verbal capacities and tendency to express such thoughts in the context of play.

The duration criterion was an additional item in need of modification for young children, as research has demonstrated that younger children tended to experience greater variability in mood than older children and adults.⁴¹ Nearly 80% of the preschoolers identified as depressed did not meet the traditional, DSM-IV 2-week duration criterion (as described in the DISC-IV-YC) despite demonstrating multiple markers of depression.⁴² As a result, Luby and colleagues proposed a softening (or setting aside) of the DSM duration criteria, requiring only that symptoms be present over a 2-week period, though not necessarily with persistence.

Using these modifications of symptom descriptions and duration criteria, Luby and colleagues were able to identify a subsample of depressed preschoolers in accordance with markers of a valid psychiatric syndrome, as proposed by Robins and Guze.⁴³ These markers include family history of related disorders, evidence of impairment, biologic markers, and a stable symptom constellation.³⁹ Despite historical beliefs that younger children are more likely to exhibit masked symptoms (such as “somatization”) instead of typical symptoms,⁴⁴ Luby and colleagues⁴⁵ discovered that typical symptoms occurred at higher rates, and therefore, function as more useful clinical markers of the disorder. Each of the depressive symptoms, with the sole exception of irritability, were found to occur more frequently in depressed preschoolers than in both healthy (no disorder) and psychiatric (meeting criteria for DSM-IV attention-deficit/hyperactivity disorder (ADHD) and/or disruptive disorders) comparison groups. Irritability/sadness (assessed jointly) was found to be the most sensitive symptom, as it was identified in 98% of depressed preschoolers, whereas anhedonia was found to be the most specific, because it was evidenced in solely the depressed group. As would be expected of a valid clinical syndrome, this study reported high internal consistency of depressive symptoms.⁴⁵

Due to its evident specificity, Luby and colleagues⁴⁶ later compared the group of depressed preschoolers displaying anhedonia (54% of the depressed sample) to depressed preschoolers without this symptom, as well as to healthy and psychiatric controls, finding that anhedonically depressed preschoolers had the highest depression severity scores of the four subgroups. Furthermore, anhedonically depressed preschoolers evidenced features of depression similar to those exhibited by depressed adults, such as neurovegetative signs, lack of brightening, and alterations in stress cortisol reactivity. These results suggest that anhedonia may be a marker of a more severe, depressive subtype in preschoolers, as has been demonstrated in studies of older children and adults.⁴⁷

Evidence of impairment is also key to the validation of a clinically significant symptom constellation, although capturing impairment in preschoolers requires the use of more

developmentally sensitive measures due to their reliance on caretakers for daily functioning.⁴⁸ As such, Luby and colleagues were able to identify evidence of impairment by focusing on measures of social development, which was determined to best represent a preschooler's overall competence and adaptive functioning. Notably, impairment in social development was found in this sample of depressed preschoolers, as demonstrated by significantly lower scores on the Vineland socialization subscale in comparison with that of healthy controls.³⁹ Similar to findings of specific cognitive deficits in older children and adults suffering from depression,^{49–51} this subsample also showed impairments in cognitive functioning—specifically visual spatial skills. In comparison with healthy controls, preschoolers identified as depressed performed more poorly on a block construction task than healthy controls.⁵²

In a larger and more comprehensive second-stage investigation, impairment was assessed using the full Vineland⁵³ as well as other scales, such as the Preschool and Early Childhood Functional Assessment Scale (PECFAS).⁵⁴ This study further replicated and expanded upon previous findings of impairment, evidencing impairment in a sample of depressed preschoolers across multiple domains (all seven PEC-FAS domains) and according to multiple informants.⁴ Notably, in this larger study, there were no significant delays in development overall, as measured by the Vineland.

Although markers such as family history of depression and evidence of impairment are important in establishing the validity of a psychiatric disorder, biologic markers are crucial to understanding the pathophysiology of a disorder, and therefore, to achieving the next level of scientific validity. Toward this end, Luby and colleagues used biologic measures in their study of preschool depression as well. According to research on depression in adulthood conducted by Nemeroff and others, a fundamental element of the pathophysiology, and perhaps to the etiology of depression, is a dysfunctional stress response.^{55–56} This finding has been supported by additional research on depressed adults focusing on alterations of the stress response.^{57–61} To begin to investigate this issue in preschool children, Luby and colleagues⁶² measured salivary cortisol during and subsequent to mildly stressful laboratory tasks. Results showed that depressed preschoolers displayed unique patterns of stress cortisol reactivity when compared with those of healthy controls. Specifically, although healthy controls exhibited a decrease in cortisol levels over the course of the assessment compatible with steady adaptation to the laboratory environment, cortisol levels of depressed preschoolers showed persistent elevations. These findings are the first reported evidence of biologic correlates of preschool depression.

Dysthymic Disorder

Though very little research has been conducted on preschool dysthymic disorder, Kashani and colleagues⁶³ were able to identify a subsample of clinically referred preschool children using traditional, DSM-IV diagnostic criteria as well as proposed alternative research criteria, supporting the existence of dysthymic disorder in the preschool period. Because it was necessary for preschoolers to meet both traditional and alternative DSM-IV criteria, a conservative approach to diagnosis was used. Furthermore, preschoolers were required to verbally endorse symptoms of irritability and sadness, which, given the limited verbal capacities of preschool-aged children, further restricted criteria for diagnosis. Nevertheless, in a sample of 300 clinically referred preschoolers, 2.7% ($n = 8$) met criteria for dysthymic disorder. All of these children had a family history of psychiatric disorders. In addition, aggressive behavior and somatic complaints were endorsed by 100% of this subsample. Since dysthymia is generally considered to be a diagnosis associated with less acute morbidity than MDD, it is not surprising that none of the identified, dysthymic preschoolers demonstrated hopelessness, persistent loss of interest, and brooding, all of which are symptoms suggestive of a more depressive subtype. However, if left untreated, it is possible

that a more severe syndrome could manifest. As a result, more research in this area is necessary to better understand dysthymic disorder in preschool-aged children.

FAMILY HISTORY AND RISK FACTORS

Depressive disorders are known to be transmitted through both genetic and psycho-social mechanisms—a finding that is evidenced in studies of older children and adults.^{64–68} Consistent with this finding, Luby's sample of depressed preschoolers had a greater family history of depression compared with controls, as indicated by data on first- and second-degree relatives obtained from the parent informant.³⁹ In addition, a recent study that examined the associations between psychopathology in first- and second-generation relatives with behavior problems in the grandchild identified a significant interaction between both grandparental and parental MDD and internalizing symptoms in children aged 24 months, as measured by the CBCL.⁶⁹ Furthermore, even in the absence of parental MDD, an association between MDD in the second-generation relative (grandparent) and internalizing problems in the grandchild was still evident. Nonetheless, the presence of MDD in both the grandparental and parental generation did not convey a higher risk for the grandchildren than either risk factor independently.

Interestingly, having a family history of depression has also been shown to be associated with alterations in brain activity known in depression, as evidenced by frontal EEG asymmetries detected in depressed mothers and their newborns.⁷⁰ In previous studies examining EEG asymmetry in depressed adults, depressed subjects demonstrated decreased left-sided frontal activation in comparison with healthy controls.^{71–72} Additional research has shown that frontal EEG asymmetry is related to affect processing in both infants and adults,^{73–74} such that right-frontal EEG activation is associated with negative affect, and left-frontal EEG activation is associated with positive affect. Consistent with this idea, numerous studies have shown greater right-frontal EEG asymmetry in infants of depressed mothers, suggesting a relationship between asymmetries in frontal lobe activation and infants' display of negative emotions.^{75–77} Behavioral differences observed in naturalistic, dyadic interactions between depressed mothers and their newborns have also been linked to decreased left-frontal EEG activation in infants;⁷⁶ an interesting finding as infants characteristically display greater activation in the left-frontal area during pleasurable interactions.⁷⁸ These atypical patterns of brain activity generalized to positive interactions with nondepressed strangers as well,⁷⁶ although it remains unknown whether similar patterns of brain activity would be noted in interactions between infants of depressed mothers and other caregivers. Nevertheless, due to the fact that the frontal region plays such a crucial role in mediating emotional behavior in infants,⁷⁹ these findings have interesting implications for frontal EEG asymmetry as a possible risk marker for high negative affect later in life.

PROGNOSIS

Since the investigation of preschool-onset mood disorders is relatively new, there is little information regarding the stability and course of preschool depression into later childhood and adolescence. The population prevalence of preschool depression also remains somewhat ambiguous due to lack of clinical variability in diagnosing the disorder.⁸⁰ However, a recent epidemiologic study conducted by Egger and colleagues⁸¹ reported a prevalence rate of 1.4% for MDD, 0.7% for depression not otherwise specified, and 0.6% for dysthymia, based on parent report of symptoms. Earlier studies have shown stability of general, preschool-onset psychopathology over a 4-year period.⁸² Luby and colleagues³⁹ have reported that preschool depression was stable over a 6-month follow-up period. This is especially noteworthy because difficulties exhibited during the preschool period are commonly

regarded as transient despite growing evidence to the contrary.^{83,84} New findings demonstrating the 2-year stability and homotypic continuity of preschool-onset depression in the context of a remitting and relapsing course have recently become available as well, indicating that preschool depression is neither a transient, nor a nonspecific, early condition (J. Luby and colleagues, unpublished data, in press). Notably, 57% of depressed preschoolers had at least one recurrence of depression in the 2-year follow-up period, whereas 18% evidenced a persistent course over the 2 years.

Due to societal expectations of the preschool period as one in which positive emotion is high and emotional suffering is not experienced under normal conditions, it is difficult for many to accept the idea that depression could arise during this “carefree” time. Furthermore, at an age in which wide variations in behavior and emotional expression frequently arise and are often ephemeral, some express concern that applying psychiatric diagnoses to preschoolers may pathologize normative behavioral extremes. In spite of these misconceptions and ambiguities, empiric research has shown that preschoolers can meet criteria for clinical depression and show significant impairment in functioning related to the depressive symptoms. Although slight modifications to the diagnostic criteria were necessary, Luby and colleagues³⁹ were able to identify a sample of depressed preschoolers who displayed several markers of a valid psychiatric syndrome. The modifications include the incorporation of play themes in questions regarding preoccupation with death and suicidality and alterations of standard duration criterion. Additionally, data from two independent samples have now shown that depressed preschoolers exhibited typical symptoms of depression more frequently than masked symptoms;⁴⁵ this is an important finding given traditional beliefs that younger children are incapable of displaying the typical symptoms evidenced in adults.⁴⁴ This was noted in anhedonically depressed preschoolers in particular, who exhibited more acute features of depression comparable to those known in anhedonically depressed adults.⁴⁶ As a result, it is possible that anhedonia may be an indicator of a more severe, depressive subtype in preschool-aged children as well. Given these findings, it is clear that preschoolers may experience clinically significant depression that warrants clinical attention. Yet to better identify, diagnose, and treat preschool depression, more research in this area is needed with the aim of applying earlier and potentially more efficacious treatment interventions.

ANXIETY DISORDERS

Distinguishing Between Normative and Pathologic Fears

Anxiety symptoms have long been recognized in preschool-age children. Multiple early longitudinal epidemiologic studies have demonstrated that it is not uncommon for preschoolers to have fears in general, but most notably, fears of the dark and fears of animals.^{85–88} In decreasing order of prevalence, common fears include fear of noises, strange situations, pain or sensory novelties, heights, animals, and sudden changes. Fears of physical injury are also prominent among preschool children.⁸⁹ Although some fears are normative and transient in development, it is now known that other anxiety patterns can be distressing and impairing to preschoolers and their families, persist, worsen in severity, and are associated with additional comorbidities in later childhood.⁹⁰ The degree of impairment, distress, uncontrollability, pervasiveness, and persistence all may help to distinguish between normative development and psychopathology.¹²

Diagnosing Discrete DSM-IV Anxiety Disorders

The DSM-IV categorizes anxiety disorders into multiple discrete categories, including separation anxiety disorder (SAD), SP, obsessive-compulsive disorder (OCD), and generalized anxiety disorder (GAD). Panic disorder is thought to occur more commonly in

older children and adults with onset at puberty, and, therefore, is rarely observed in early childhood.^{91–93} Posttraumatic stress disorder (PTSD) is also an anxiety disorder well known during the preschool period and more extensively studied to date. Consequently, it is covered separately in this special issue (see the article by Coates and Gaensbauer, elsewhere this issue). The question of whether GAD and SAD represent truly discrete and separable disorders in the preschool period remains largely uninvestigated. Both disorders have been suggested as loading onto one broader *anxiety* factor in the preschool period.⁸⁹ Other emerging research suggests that anxiety should continue to be studied as separate, distinct disorders, as specificity has been observed in very young children, and each disorder may necessitate a distinct treatment.^{90–94}

A confirmatory factor analysis using current DSM-IV nosology suggested that preschool anxiety symptoms could be differentiated into five dimensions: GAD, SAD, social anxiety, obsessive compulsive symptoms, and fears, supporting the notion that anxiety disorders are distinct even as early as the preschool period.^{89–94} This notion was further supported in a larger study (n = 1073) of preschoolers from a pediatric clinic, which found “emotional syndromes” differentiated into three factors: MDD/GAD, SAD, and SP.³ OCD and PTSD were excluded from the analyses due to limited numbers of subjects with these disorders within the larger sample.³ Sterba and colleagues³ concluded that anxiety disorders are not undifferentiated despite this young age and that the use of DSM-IV in preschoolers is as applicable and valid as its use in older children. These findings from a confirmatory factor analysis provide support for the idea that anxiety disorders be studied as discrete disorders rather than as a broader group in the preschool period.³ Despite such diagnostic challenges, one epidemiologic study of preschoolers estimated the prevalence of anxiety disorders defined by the RDC criteria as 9.4% in a primary care setting.⁹⁵ This need for specificity in diagnosis, even if for purposes of treatment, is well illustrated by the example of selective mutism. Although not incorporated in anxiety disorders according to DSM-IV, the diagnosis of selective mutism (listed under the category of “disorders usually first diagnosed in early childhood”) has been associated with familial anxiety disorders, has a unique and highly specific symptom constellation, and may warrant unique treatment,^{96–98} as in OCD. Studies and clinical reports of OCD are rare overall in the extant preschool literature; however, the level of impairment in functioning and internal distress associated with these symptoms cannot be underestimated.

Diagnostic Continuity

Although many fears arising in early childhood may indeed be developmentally normative, children exhibiting impairing clinically significant anxiety disorders have been shown to have persisting disorders and are at risk for the development of comorbid conditions.^{99–100} Many longitudinal studies of anxiety have included some preschoolers as part of older samples. Although these data are of interest, studies focusing on preschool-age samples may better inform the longitudinal course of preschool-onset anxiety disorders.⁸²

Comorbidity

Anxiety is often accompanied by comorbid disorders in the preschool period. Most often, anxiety disorders co-occur with other anxiety disorders, followed by depression, ADHD, oppositional defiant disorder, and conduct disorder.¹² Comorbidity rates in an epidemiologic study in primary care centers were reported highest for specific phobia (100%), SAD (79%), selective mutism (59%), SP (55%) and GAD (53%).¹²

FAMILY HISTORY AND RISK FACTORS/EARLY PRECURSORS OF ANXIETY

In the general population, anxiety disorders have been shown to be at least partly familial with varying genetic transmission.⁹⁴⁻¹⁰¹⁻¹⁰² For example, studies examining parents of children with *selective mutism* (mentioned above) found 37% to have lifetime social anxiety compared with 14% of control parents.⁹⁷ In addition, a myriad of psychosocial risks in the preschool period have been correlated to later-onset anxiety symptoms and disorders. Empiric literature underscores the higher risks of developing an anxiety disorder in offspring of parents with anxiety and children who exhibit early behavioral inhibition (BI). Another potential contributor may be environmental *fostering of avoidance*, a phrase that refers to situations in which caregivers discourage (or might not encourage) exploration of novel situations or stimuli. This pattern could potentially be targeted for early intervention and prevention of later-onset anxiety disorders.¹⁰³⁻¹⁰⁴ Parenting style is commonly suggested as another risk factor for the development of anxiety. However, it accounted for only 4% of the variance in childhood anxiety in a meta-analysis of studies focusing on the role of parenting.¹⁰⁵

The developmental psychopathology literature has contributed studies of temperament, namely, BI, as it relates to later anxiety disorders.¹⁰⁶⁻¹⁰⁷ BI is a term originally used by Jerome Kagan¹⁰⁶ to describe how a child retreats from a novel situation or stimuli, withdraws, and seeks to remain near the caregiver. Further, BI has also been described as fearfulness exhibited with new people or in new situations.¹⁰⁸ Children with high levels of BI have been shown to have concomitant anxiety disorders;¹⁰⁹ to exhibit unique biologic markers;¹⁰⁷ and to develop higher rates of anxiety disorders in the future. These findings have suggested that BI may be a precursor of later anxiety disorders warranting continued investigation.⁹⁰⁻¹¹⁰ More specifically, BI at 21 months and 6 years of age in the high-risk offspring of parents with affective disorders predicted social anxiety disorder, but no other anxiety disorder 5 years later at follow-up when compared with uninhibited children at baseline (odds ratio, 3.15; 95% CI, 1.16–8.57).¹⁰⁸ Therefore, BI may be a predictor of specific anxiety disorders, most notably, social anxiety disorder and, thus, may be a target for early intervention.¹⁰⁸

TREATMENT AND PROGNOSIS

Although approximately 60% of parents with preschoolers with anxiety disorders thought they needed help, only 10% reported having been referred for mental health evaluation despite this perceived need.¹² To date, there exists no gold standard or empirically proven treatment for any preschool anxiety disorder other than trauma-related anxiety disorders.¹¹¹ Current treatments in use in clinical settings include medication, psychoeducation, and psychosocial and psychotherapeutic treatments, although current empiric support is limited. For example, the extant literature suggests that the number of antidepressant prescriptions given to preschoolers has risen, although their specific indications, efficacy, and safety in long-term studies remain untested.¹¹² Treatment studies of children with anxiety disorders have specifically included younger children, but caution is still warranted in extrapolation to preschoolers (The Pediatric OCD Treatment Study Team, 2004). For example, three cases of preschool-age-onset OCD, including varied symptoms and signs of contamination fears, repeated hand-washing, and even intrusive thoughts related to being pregnant, have been reported with clinically severe Children's Yale-Brown Obsessive Compulsive Scale¹¹³ scores. These cases were all treated with selective serotonin re-uptake inhibitors (SSRIs) as well as augmentation with risperidone with at least temporary remission of symptoms and impairment.¹¹⁴ In our own clinic, a preschooler with intrusive, obsessional thoughts became suicidal due to the high level of distress these symptoms caused. Due to the paucity of literature on the treatment of preschool disorders overall, and anxiety disorders such as

OCD in particular, treatments are often extrapolated from those with proven efficacy over placebo in older children such as the use of SSRIs for OCD.¹¹⁵ Such extrapolations warrant caution and underscore the need for investigations of preschool-age-specific treatments in anxiety disorders.

A number of educational therapies have been investigated to target early onset BI in the preschool-age group.¹⁰⁴ One intervention, for example, included six teaching sessions for the parents of preschoolers who exhibited BI and withdrawn behaviors. These six, 90-minute educational sessions incorporated psychoeducation on development of anxiety, overprotection and maintenance behaviors, high-risk periods, parent management techniques, gradual exposure techniques, and cognitive restructuring of parental worry. Preschoolers whose parents received this education were compared at 12 months to those preschoolers whose parents did not. Preschoolers whose parents received the educational sessions were less likely to receive an anxiety diagnosis at 12 months posttreatment.¹¹⁶

Several variants of cognitive behavioral therapy have been used to target younger children with anxiety disorders as in PTSD,¹¹⁷⁻¹¹⁸ but the empiric support is limited overall for other disorders.¹¹⁹ Also ongoing are investigations of adaptations of Parent Child Interaction Therapy¹²⁰⁻¹²¹ validated in preschoolers with disruptive disorders to target those with anxiety disorders.¹²²

In addition to medication and other psychotherapies, dyadic play therapy remains the key modality for preschool children in general, although specific studies supporting its efficacy for anxiety disorders are currently lacking. Dyadic play therapy provides opportunities to master fears through play as well as opportunities for scaffolding positive parent-child interactions.¹²³⁻¹²⁵

EXAMPLE OF A CASE OF AN ANXIOUS/DEPRESSED PRESCHOOLER

L.K. is a 4.5-year-old who first presented to the clinic for symptoms of excessive worry. He worried that his mother would die if he separated from her to attend preschool; he cried excessively and daily at school such that the mother was frequently called to pick him up, affecting her ability to sustain a job. On the few days he stayed at school, he complained of stomachaches to the school nurse, and no medical etiology was found. At night, he could not fall asleep, because he feared that his mother would be taken away by a monster. He began to sulk, and no longer enjoyed playing with the neighborhood children, an activity he once enjoyed. Instead, he insisted on being in physical proximity to his mother, never letting her leave his sight without crying intensely. His affect became globally sad. When in the company of any other caregiver, he would incessantly ask of his mother's safety. Had she died? Was she safe?

There were no reports of developmental delays, abuse, medical illnesses, or other traumas; however, of interest, was a family history of GAD. L.K. was referred for dyadic psychotherapy and responded well to systematic desensitization and exposure to a series of gradual and increasing amounts of time away from his mother without asking for reassurance of her safety. In addition, his mother was coached on how to enact separations more effectively and reassure him that they would be tolerated by both. He was able to resume full-day preschool after several months of therapy.

SUMMARY

It is clear that significant progress has been made in the understanding, validation, and differentiation of internalizing disorders (which include both mood and anxiety disorders) in the preschool period. Advancing earlier models of psychopathology that addressed

internalizing symptoms in a global and undifferentiated fashion, the empiric evidence now supports the need to use more nuanced and specific diagnostic distinctions in this domain in young children. Advances in research methodologies that have facilitated the ability to capture young children's internal feeling states, as well as to quantify and interpret observed behavior from which mood and affect can be inferred, have catalyzed progress in this area. However, as this article elucidates, much work remains to be done in all internalizing disorders in young children. In depression, although there is an emerging body of work validating and describing the disorder in early childhood, further work clarifying the nosology and developing age-appropriate treatments is now needed. In the area of anxiety disorders, there remains a relative paucity of data validating and defining the disorders as they manifest in the preschool period. Along this line, it remains unclear how to differentiate and whether and how to lump or split specific early onset anxiety disorders. At the same time, basic developmental studies have identified early risk factors for later anxiety disorders, which may be helpful to direct studies focused on the definition of internalizing disorders in the preschool period.

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