The Enigma of Bipolar Disorder in Children and Adolescents

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Abstract

In the past decade, there has been a proliferation in the number of children and adolescents diagnosed with bipolar disorder. Except in rare cases, the young people who receive this diagnosis do not meet the strict diagnostic criteria for bipolar disorder I or II in the DSM-IV-TR. Many pediatric psychiatrists insist there are important development differences in the manifestation of bipolar disorder in childhood and adolescence. In place of clear-cut episodes of mania/hypomania and depression, they argue that younger people with the disorder experience chronic irritability, aggressive behavior, impulsivity, extremely rapid mood swings, hyperactivity, and severe temper tantrums. Given that many of the young people pose special challenges to the school system, the purpose of this article is to update school counselors on this controversial expansion of the diagnosis and treatment of bipolar disorder among children and adolescents.

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Among a multitude of other responsibilities, school counselors have an important role to play in the school system in identifying and serving students who may be experiencing severe mental health problems (Ritchie & Partin, 1994). Yet, discharging this responsibility can be difficult because school counselors typically receive very little, if any, training in the use of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association, 2000). Though access to a DSM-IV-TR manual may provide school counselors with some diagnostic possibilities, the differential diagnostic process subsumed under the DSM-IV-TR is very complex and requires years of training and supervised experience to master. Furthermore, the diagnostic principle of *clinical judgment* allows mental health professionals a great deal of latitude in assigning diagnoses to clients who do not neatly fit the diagnostic criteria for specific disorders. Because of this principle, school counselors may find themselves working with students who do not meet the diagnostic criteria for the diagnoses included in their medical records or individualized educational plans. Nowhere is this problem more apparent than the emerging phenomenon of pediatric bipolar disorder.

In an article describing the most common mental disorders encountered by school counselors, Geroski, Rodgers, and Breen (1997) did not provide any details about bipolar disorder because of their assertion that this disorder was relatively rare in school settings. Unfortunately, this statement no longer applies (e.g., Bardick & Bernes, 2005). School counselors have found themselves working with an increasing number of students who have been diagnosed with bipolar disorder. This pattern is disconcerting not only because of the seemingly high prevalence rates, but also because most of the

young people who receive this diagnosis do not meet the official criteria for Bipolar I or II in the DSM-IV-TR. (American Psychiatric Association, 2000; Wozniak et al., 1995). Unbeknown to many counselors, the conceptualization of bipolar disorder in the psychiatric literature has been expanded to include a range of emotional dysregulation problems not specifically included in the DSM-IV-TR, such as pediatric bipolar disorder (e.g., Carlson, 1998). Children and adolescents are now being diagnosed with bipolar disorder for exhibiting severe emotional and behavioral instability in the absence of any discrete episodes of mania, hypomania, or depression as required by the DSM-IV-TR (e.g., Weckerly, 2002). Consequently, the purpose of this article is to update school counselors on the controversial diagnosis and treatment of bipolar disorder in school-aged children. This information will help school counselors both better understand the manifestation of bipolar disorder in school-aged children and improve referral decisions by presenting treatment strategies that are likely to be effective for this population.

Increased Prevalence Rates

Bipolar disorder was once considered to be extremely rare before early adulthood (Kosten & Kosten, 2004; Weckerly, 2002; Youngstrom, Meyers, Youngstrom, Calabrese, & Findling, 2006). For many years, children and adolescents who exhibited severe mood swings and highly erratic behavior were likely to be diagnosed with a psychotic disorder, such as schizophrenia (Carlson, 1990). Yet, in recent years, systematic research studies have uncovered a dramatic increase in the number of children and adolescents being diagnosed with bipolar disorder. In one of these studies, Blader and Carlson (2007) examined the records of children and adolescents involved in the National Hospital Discharge Survey that covered the years from 1996 to 2004. In

1996, only 10% of young people were discharged from hospitals with a diagnosis of bipolar disorder, a figure that rose to 34% just 10 years later. In another recent study, Moreno et al. (2007) compared the number of office-based visits for bipolar disorder among physicians who participated in the National Ambulatory Care Survey between 1995-1996 and 2002-2003. They found that the number of office visits by children and adolescents for bipolar disorder increased nearly 4000% during this time frame. Physicians are not alone in discovering more cases of bipolar disorder. Parents and teachers, fueled by information reported in the popular press and internet, are also increasingly finding bipolar disorder in their students and children, respectively (McClure, Kubiszyn, & Kaslow, 2002).

Several explanations have been put forth to account for the increased diagnosis of bipolar disorder in children and adolescents. Blader and Carlson (2007), who conducted the recent hospitalization study, hypothesized that the “growth in the rate of BD-diagnosed discharges might reflect a progressive ‘re-branding’ of the same clinical phenomenon for which hospitalized children previously received different diagnoses” (p. 112). Along this line, Carlson (1998) suggested that the increased prevalence of bipolar disorder may be an unintended consequence of changing the diagnostic criteria for attention-deficit hyperactivity disorder (ADHD). He noted that many of the symptoms of pediatric bipolar disorder (e.g., affective instability, aggression) were once considered to be symptoms associated with ADHD. However, these symptoms were subsequently removed from the diagnostic criteria to improve diagnostic reliability. He speculated that those who do not fit the more restricted diagnostic criteria for ADHD are being diagnosed with bipolar disorder because a single diagnosis of ADHD fails to adequately

capture the breadth of their problems. Others have attributed the rise in the diagnosis of bipolar disorder in children and adolescents to the availability of second-generation antipsychotics and newer mood-stabilizers that have been shown to be effective in treating severe irritability and aggression (e.g., Moreno et al., 2007). Because these medications are widely prescribed and FDA-approved for adults with bipolar disorder, perhaps physicians believe that a diagnosis of bipolar disorder is needed to justify prescribing these medications to young people who experience severe affective and behavioral instability.

Controversies Associated With Pediatric Bipolar Disorder

Some researchers and clinicians have welcomed the increased recognition of pediatric bipolar disorder because of their belief that many young people with bipolar disorder were misdiagnosed in the past and, consequently, failed to receive effective treatment (e.g., Geller & Luby, 1997). However, others have argued that the pendulum has swung too far in the other direction in that bipolar disorder is now being diagnosed in many children and adolescents who do not actually have the disorder (Klein, Pine, & Klein, 1998; Weller, Calvert, & Weller, 2003). The experts on both sides of this debate agree that the children and adolescents who are being diagnosed with bipolar disorder do not meet the strict diagnostic criteria for bipolar disorder in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, test revision (DSM-IV-TR; American Psychiatric Association, 2000); however, they disagree as to how discrepancies from the diagnostic criteria should be treated.

The children and adolescents who are now being diagnosed with bipolar disorder differ from their adult counterparts in two fundamental areas: cycling patterns and

symptom presentations. In the DSM-IV-TR (American Psychiatric Association, 2000), a manic episode is defined as an “abnormally and persistently elevated, expansive or irritable mood” that must be present for at least one week, unless hospitalization is required, together with three additional symptoms, such as “inflated self-esteem or grandiosity, decreased need for sleep, pressure of speech, flight of ideas, distractibility, increased involvement in goal-directed activities or psychomotor agitation, and excessive involvement in pleasurable activities with a high potential for painful consequences” (p. 357). Yet, the prototypical manifestation of bipolar disorder in which an individual experiences clear-cut episodes of mania/hypomania and depression, punctuated by periods of normal functioning, rarely occurs in children and adolescents (Carlson, Loney, Salisbury, & Volpe, 1998). Instead, most of the young people who receive this diagnosis experience moods shifts that change dramatically on a daily, or even hourly, basis (Leibenluft, Charney, Towbin, Bhangoo, & Pine, 2003). In addition to divergent cycling patterns, most of the young people diagnosed with bipolar disorder also exhibit a different constellation of symptoms from adults with the disorder. In the place of episodes of depression and mania/hypomania, children and adolescents diagnosed with bipolar disorder are more likely to experience *chronic affective and behavioral instability* characterized by severe irritability, temper tantrums, aggressive behavior, impulsivity, and hyperactivity (Biederman, Mick, Faraone, & Wozniak, 2004; Hamrin & Pachler, 2007; Weckerly, 2002).

While acknowledging these discrepancies from the standard diagnostic criteria, proponents of the pediatric bipolar designation contend that the current definition of bipolar disorder in the DSM-IV-TR (American Psychiatric Association, 2000) is too

narrow and fails to account for how bipolar disorder is manifested differently across the lifespan (e.g., Geller & Luby, 1997; Weller et al., 2003). They argue that although the DSM-IV-TR formally recognizes developmental differences in the experience of depression for children and adolescents (i.e., more irritability than sadness), it does not acknowledge any differences in the experience of bipolar disorder for this age group. Furthermore, it appears that the *atypical* manifestations of bipolar disorder experienced by children and adolescents may not be that atypical after all (Weckerly, 2002). Like their younger counterparts, many adults with bipolar disorder do not neatly match the DSM-IV-TR criteria either. For example, McElroy et al. (1992) found that about 30% of adults with bipolar disorder primarily experience mixed episodes rather than clear-cut episodes of mania in which euphoria and grandiosity dominate. Along this line, Youngstrom, Birmaher, and Findling (2008) make the case that the extremely rapid cycling patterns exhibited by children and adolescents with bipolar disorder should be classified as mixed episodes rather than ultrarapid (5-364 episodes a year) or ultradian cycling (>365 episodes a year). Studies such as these suggest that mixed mood episodes might be more common than the traditional manic episodes emphasized in the DSM-IV-TR and abnormal psychology textbooks.

As already mentioned, this expanded conceptualization of bipolar disorder is not shared by all, and opponents also have research that calls into question the validity of a bipolar disorder diagnosis in children and adolescents (e.g., Klein et al., 1998). Severe irritability, one of the hypothesized features of pediatric bipolar disorder, is also one of the most controversial (Rich & Leibenluft, 2006). Although the DSM-IV-TR (American Psychiatric Association, 2000) recognizes irritability as a symptom of mania, critics point

out that irritability is not unique to mania as it can also be a symptom of a depressive disorder, a pervasive developmental disorder, an anxiety disorder, or even a disruptive behavior disorder (Leibenluft et al., 2003; McClure et al., 2002; Rich & Leibenluft, 2006). Research casts doubt on the diagnostic value of irritability in identifying a child or adolescent with bipolar disorder. For example, Geller et al. (2002) found that irritability was not helpful in discriminating bipolar disorder from ADHD because this symptom was so common in both diagnostic groups. Excluding irritability from the definition of mania or hypomania would dramatically reduce the number of children and adolescents diagnosed with bipolar disorder. In a study conducted by Wozniak et al. (1995), 77% of the children in their sample met criteria for bipolar disorder because of extreme irritability, while only 5% meet criteria because of traditional symptoms of mania (e.g., euphoria, grandiosity). While severe irritability is a serious problem that demands treatment, it is debatable whether bipolar disorder should be diagnosed in children and adolescents who present with severe irritability in the absence of other traditional symptoms of mania or hypomania.

Recent findings from longitudinal research raise additional concerns about the validity of bipolar disorder diagnoses in children and adolescents. Preliminary research indicates that many of the young people who have been diagnosed with bipolar disorder will not carry this diagnosis into adulthood, but instead receive subsequent diagnoses of major depressive disorder, substance use disorders, and personality disorders in adulthood (e.g., Carlson & Meyer, 2006; Post & Kowatch, 2006; Goldstein & Levitt, 2006). Although more research is definitely needed, it seems likely that many of the children and adolescents who are currently diagnosed with bipolar disorder will never

experience the more prototypical forms of bipolar disorder I or II in adulthood (Youngstrom et al., 2006). Such findings raise serious questions about the hypothesized developmental differences in the manifestation of bipolar disorder.

Additional questions about the validity of pediatric bipolar disorder arise when clinicians attempt to distinguish bipolar disorder from other disorders with similar presentations. Affective and behavior instability are not unique to bipolar disorder as these symptoms are commonly associated with attention-deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), conduct disorder (CD), schizophrenia, substance use disorders, pervasive developmental disorders, and early-onset personality disorders (Biederman et al., 1996; Geller & Luby, 1997; Kutcher, Marton, & Korenblum, 1990; Papolos, 2003; Weckerly, 2002). Furthermore, researchers have found that pediatric bipolar disorder is highly co-morbid with ADHD, ODD, and CD (e.g., Faedda, Baldessarini, Glovinsky, & Austin, 2004; Spencer et al., 2001), which casts further doubt as to the validity and distinctiveness of pediatric bipolar as a new diagnostic entity.

Alternative Conceptualizations of Bipolar Disorder

As this review indicates, there is currently a lack of consensus as to how to categorize those children and adolescents who present with extreme affective and behavioral instability in the absence of clear-cut episodes of mania or hypomania. One side (e.g., Biederman et al., 2004) recommends expanding our conceptualization of bipolar disorder to accommodate this clinical population, while the other side (e.g., Klein et al., 1998) contends that these young people are experiencing problems that are too divergent from bipolar disorder to receive the same diagnosis. Leibenluft et al. (2003)

developed a new taxonomy for this population that includes three subtypes of juvenile mania. The first subtype, *narrow phenotype*, refers to those children and adolescents who meet the conventional diagnostic criteria for mania or hypomania in the DSM-IV-TR. The second subtype, *intermediate subtype*, refers to those who experience either traditional symptoms of hypomania for less than a week [*(hypo)mania not otherwise specified*] or who experience discrete episodes of irritability [*irritable (hypo)mania*]. The final subtype, *severe mood and behavioral dysregulation*, refers to those children and adolescents who exhibit the following symptoms: irritability, high reactivity to negative events, aggressive behavior, low frustration tolerance, and agitation. Those who fall into this third category typically experience chronic emotional and behavioral problems without any significant periods of normal mood or adequate psychosocial functioning.

Though still an experimental diagnosis, subsequent research has provided some support for the validity of this third subtype. Brotman et al. (2006) used a modified version of this subtype, which they called *severe mood dysregulation*, to evaluate the nature, correlates, and developmental course of affective instability among adolescents in the Great Smoky Mountain Community Sample. They found that 3.3% of the sample satisfied diagnostic criteria for this new classification, which they noted exceeds the prevalence rate for both major depressive and bipolar disorder in this age group. Consistent with the research on pediatric bipolar disorder, the three most common co-morbid disorders associated with this subtype were ADHD (27%), conduct disorder (26%), and oppositional defiant disorder (25%). They also found that severe emotional dysregulation in adolescence may be a precursor to chronic major depression in adulthood rather than bipolar disorder. In another study, Leibenluft, Cohen, Gorrindo,

Brook, and Pine (2006) examined the longitudinal course of chronic and episodic irritability in a sample of approximately 700 individuals who had been tracked from early adolescence to early adulthood. They found that *episodic* irritability during early adolescence predicted bipolar disorder, generalized anxiety disorder, and phobias during late adolescence and early adulthood, whereas *chronic* irritability predicted diagnoses of disruptive behavior disorders and major depressive disorder.

Recommended Treatment Strategies

Pharmacotherapy

Medication is considered to be the first line of treatment for children and adolescents diagnosed with bipolar disorder. Historically, lithium has been considered to be the drug of choice for managing classical mania in adults with bipolar disorder (Hamrin & Pachler, 2007). Given this track record, lithium subsequently gained formal FDA approval for the treatment of mania in children and adolescents. However, this approval was granted based on its effectiveness with adults, not from any demonstrable effectiveness with children and adolescents with bipolar disorder (Smarty & Findling, 2007). In fact, very little evidence supports the use of lithium in treating children and adolescents with bipolar disorder (e.g., Singh, Pfeifer, Barzman, Kowatch, & Delbello, 2007), which should not be surprising given the substantial differences in symptom presentation and cycling patterns between young people and adults diagnosed with bipolar disorder.

The pharmacological treatment of pediatric bipolar disorder can become quite complicated, and frequently those diagnosed with the disorder endure multiple medication trials before finding a medication formula that works. A panel convened by

the Child and Adolescent Bipolar Foundation developed treatment guidelines for physicians who treat children and adolescents with bipolar disorder (Kowatch et al., 2005). For those young people who do not exhibit comorbid psychosis, the panel recommended that treatment start with either a mood stabilizer [e.g., lithium, divalproex acid (Depakote®), carbamazepine (Tegretol®)] or an atypical anti-psychotic [e.g., risperidone (Risperdal®), olanzapine (Zprexa®), clozapine (Clozaril®), quetiapine (Seroquel®)]. Other experts have recommended treatment commence with one of the newer, atypical anti-psychotics (Biederman et al., 2000; Mick, Biederman, Faraone, Murray, & Wozniak, 2003), while Hamrin and Pachler (2007) suggested that combination treatments, whether a mood stabilizer plus an atypical antipsychotic or two mood stabilizers, hold the most promise in treating pediatric bipolar disorder.

Even after achieving some semblance of mood stabilization, many of the children and adolescents diagnosed with bipolar disorder continue to exhibit significant emotional and behavioral problems. Although supplementation with an antidepressant might seem reasonable for treating depressed mood and irritability, some physicians are concerned that the use of antidepressants, specifically the SSRI's, may induce or at least exacerbate emotional instability in those with pediatric bipolar disorder (e.g.,Pavuluri & Bishop, 2007). Ghaemi, Ko, and Goodwin (2002) even suggest that the copious use of antidepressants in the treatment of bipolar disorder may be responsible for the increased prevalence of rapid cycling bipolar disorder. However, other experts contend that these fears of inducing mania with SSRI's are exaggerated, and they suggest that many young people can experience better outcomes by judiciously incorporating these antidepressants into their treatment plans (Rich & Leibenluft, 2006).

Similar concerns have been voiced about the use of psychostimulants in treating comorbid ADHD. For those with both disorders, a sustained-release stimulant [e.g., methylphenidate (Concerta®)] may be helpful in managing symptoms of ADHD without exacerbating irritability or aggressive behavior (Hamrin & Pachler, 2007).

Though the aforementioned medications have brought much relief to those diagnosed with pediatric bipolar disorder and their families, several barriers limit the effectiveness of these treatments. First, for these medications to be effective, they need to be taken conscientiously, and regular blood tests may be needed to assure therapeutic blood levels (Hamrin & Pachler, 2007). Because many of the parents of these young people have similar problems themselves (e.g., inattention, emotional instability, inadequate psychosocial functioning), medication noncompliance and treatment dropout frequently occur (DelBello, Hanseman, Adler, Fleck, & Strakowski, 2007; Miklowitz et al., 2004). Second, many of the abovementioned medications produce intolerable side effects. The atypical anti-psychotics may cause extrapyramidal side effects (e.g., tremor, slurred speech, dystonia) and weight gain, while the anticonvulsants may cause “weight gain, nausea, sedation, dizziness, tremor, headache, visual disturbances, blood dyscrasias, elevated thyrotropin levels and alopecia [hair loss]” (Hamrin & Pachler, 2007, p. 49). Side effects such as weight gain and hair loss are especially problematic for adolescents who are frequently hypersensitive about their appearance. Finally, as it stands now, the pharmacological treatment of pediatric bipolar disorder remains more art than science. Unfortunately, many children and adolescents diagnosed with bipolar disorder are being treated with medications that have rather meager evidence of their effectiveness (McClure et al., 2002). Readers also should

keep in mind that this treatment literature suffers from a lack of controlled double-blind studies, and that most of the purported benefits of these medications come from case reports, chart reviews, and open-label trials (Smarty & Findling, 2007).

Counseling Interventions

Although pharmacotherapy continues to be the first line of treatment, evidence is beginning to accumulate that demonstrates the added value of counseling interventions in treating pediatric bipolar disorder. One of the most useful interventions that mental health counselors can offer young people and their families is the Family-Focused Psychoeducational Treatment Model (Miklowitz et al., 2004), which incorporates both psychoeducation and skills training. Counseling interventions may also be effective in directly treating the symptoms of pediatric bipolar disorder and comorbid conditions. McClure et al. (2002) suggested that cognitive-behavioral therapy may be helpful in treating pediatric bipolar disorder given its track record in treating major depression and dysthymia in this age group. Furthermore, given the hypothesized relationship between borderline personality disorder and bipolar disorder (e.g., Paris, Gunderson, & Weinburg, 2007), interventions that have been shown to be effective in treating the former may also be helpful in treating the later. In support of this hypothesis, one recent pilot study found that dialectical behavior therapy was a useful adjunct to medication in the treatment of pediatric bipolar disorder (Goldstein, Axelson, Birmaher, & Brent, 2007). Finally, counseling interventions may also be useful in treating the comorbid disorders that frequently accompany pediatric bipolar disorder. There are a number of empirically-validated psychosocial interventions to treat the disruptive behavior disorders that

frequently co-occur with pediatric bipolar disorder (see Christophersen & Mortweet, 2001; Kazdin & Weisz, 2003).

Summary and Conclusions

Until recently, students who exhibited severe behavior problems were likely diagnosed with attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), or conduct disorder. Because these three disorders can be treated fairly well with psychosocial interventions (Kazdin, & Weisz, 2003), a referral to a non-medical mental health professional (counselor, social worker, psychologist) would have been a reasonable decision in these situations. However, many pediatric psychiatrists have argued that the emotional and behavioral problems exhibited by many of these young people reflect a fundamental mood disorder, rather than a traditional behavioral disorder (e.g., Biederman et al., 2004). As an example of this paradigm shift, a roundtable convened by the National Institute of Mental Health (2001) recommend the use of *bipolar disorder NOS* for characterizing children and adolescents who exhibit severe emotional and behavioral instability in the absence of clear-cut episodes of mania or hypomania. From this framework, it is critical for school counselors to recognize potential symptoms of pediatric or early-onset bipolar disorder so referrals will be made for more specialized psychiatric services. Specifically, a diagnosis of pediatric bipolar disorder has prescriptive value by suggesting treatment strategies (e.g., mood stabilizers), which are likely to be effective for this population (Youngstrom et al., 2008).

However, not all mental health professionals have embraced this expanded conceptualization of bipolar disorder. Other experts in childhood psychopathology maintain that the problems experienced by these young people are too divergent from

the DSM-IV-TR criteria to justify a diagnosis of bipolar disorder. They also caution that bipolar disorder loses its meaning if it is applied to every possible manifestation of affective dysregulation (e.g., Klein et al., 1998). In addition to divergent symptom presentations from adults with bipolar disorder, research on the differential diagnosis and longitudinal course of pediatric bipolar disorder raises additional doubts as to the validity of this hypothesized diagnostic entity. The *severe mood and behavioral dysregulation* subtype proposed by Leibenluft et al. (2003) may provide a more accurate description of the emotional and behavioral problems experienced by many of those currently diagnosed with pediatric bipolar disorder, but it has not yet been established as a valid diagnostic code.

The treatment of severe emotional and behavioral instability in children and adolescents, whatever label it might be given, has proven to be very challenging. Lithium, the gold standard for managing mania in adults, has not been shown to be effective with younger individuals. The newer, atypical anti-psychotics and anticonvulsants appear to be effective in reducing irritability and agitation; yet, it is not uncommon for children and adolescents to suffer through numerous medication trials before finding some combination that works. Even when an effective combination is found, troublesome side effects and family noncompliance may limit the effectiveness of these treatments. Research on the effectiveness of counseling interventions in the treatment of bipolar disorder is also quite modest. Some evidence suggests that psychoeducation and skills-training programs are effective in helping young people and their families cope more effectively with the disorder, while cognitive-behavioral and dialectical behavior therapy may decrease depression and emotional instability,

respectively. Some have also endorsed the promise of early intervention programs in reducing the negative outcomes associated with the disorder (Biederman et al., 2000; Lewinsohn, Seeley, & Klein, 2003), but evidence of their effectiveness is basically nonexistent.

Research on the phenomenology and treatment of pediatric bipolar disorder is still in its infancy. In fact, systematic studies of bipolar disorder in this population did not commence until the 1970's (Chang & Steiner, 2003). Fortunately, during the past 10-15 years, research on the classification and treatment of pediatric bipolar disorder has proliferated. Given the advances made in just the last several years, there is reason to hope that continued research efforts will lead to both more valid diagnostic classifications and more effective treatments.

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