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## Новый психиатрический диагноз: разрушительное расстройство регуляции настроения

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### АННОТАЦИЯ

В принятом в 2013 г. руководстве DSM-5 представлен обновлённый перечень аффективных нарушений, открывающийся принципиально новым психиатрическим диагнозом разрушительного расстройства регуляции настроения (disruptive mood dysregulation disorder). Разрушительное расстройство регуляции настроения диагностируется у детей и подростков в возрасте от 6 до 18 лет и проявляется постоянной сильной и стойкой раздражительностью, а также вспышками гнева, не соразмерными вызвавшей причине. Очевидно, что состояние значительной части детей и подростков с разрушительным расстройством регуляции настроения до появления этого диагноза ошибочно расценивалось как проявление биполярного расстройства. Критерием принципиального отличия разрушительного расстройства регуляции настроения от биполярного расстройства служит отсутствие маниакальных либо гипоманиакальных при первом из них. Разрушительное расстройство регуляции настроения характеризуется выраженной коморбидностью и часто сочетается с оппозиционным вызывающим расстройством, расстройством поведения и дефицитом внимания с гиперактивностью, а также тревогой. Течение и прогностическое значение разрушительного расстройства регуляции настроения, а также выбор наиболее эффективных методов фармакологического лечения и психотерапии требуют многочисленных дальнейших исследований.

**Ключевые слова:** *разрушительное расстройство регуляции настроения, биполярное расстройство, оппозиционное вызывающее расстройство, дефицит внимания с гиперактивностью, депрессия, тревога, антипсихотики, дети и подростки.*

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## The new psychiatric diagnosis: disruptive mood dysregulation disorder

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### ABSTRACT

The DSM-5, adopted in 2013, presents an updated list of affective disorders, which opens with a fundamentally new psychiatric diagnosis of a disruptive mood dysregulation disorder. Disruptive mood dysregulation disorder is diagnosed in children and adolescents aged 6 to 18 years and is manifested by chronic severe and persistent irritability or anger, as well as outbursts of anger disproportionate to the cause. It is obvious that the condition of a significant part of children and adolescents with a disruptive mood dysregulation disorder before the appearance of this diagnosis was mistakenly regarded as manifestations of bipolar disorder. The criterion of the fundamental difference between disruptive mood dysregulation disorder and bipolar disorder is the absence of manic or hypomanic in the first of them. Disruptive mood dysregulation disorder is characterized by high comorbidity and is often combined with oppositional defiant disorder, conduct disorder and attention deficit with hyperactivity, as well as anxiety. The course and prognostic significance of a disruptive mood dysregulation disorder, as well as the choice of the most effective methods of pharmacological treatment and psychotherapy require numerous further studies.

**Keywords:** *disruptive mood dysregulation disorder, bipolar disorder, oppositional defiant disorder, attention deficit hyperactivity disorder, depression, anxiety, antipsychotics, children and adolescents.*

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Disruptive mood dysregulation disorder (DMDD) is a recent psychiatric term that first appeared in 2013 as a diagnosis in the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) published by the American Psychiatric Association. The Eleventh Edition of the International Classification of Diseases (ICD-11) does not include this diagnosis.

This new term may still be unfamiliar to many psychiatrists and clinical psychologists, including well trained specialists. DMDD is the first disorder listed under depressive disorders in the DSM-5 (Table 1). This was probably intended to remind clinicians to consider this diagnosis in their practice.

more frequently affected than girls. A population-based study that included 3,258 participants aged 2 to 17 years estimated the prevalence of DMDD to be 0.8–3.3%, with a clear predominance in preschoolers [2].

Dougherty et al. (2014) identified potential predictors of DMDD in children. Parents of 462 children age 6 years were invited for structured interviews that assessed six domains (demography, child psychopathology, functioning, temperament, parental psychopathology, and psychosocial environment). Their study revealed that DMDD diagnosis at age 6 years was associated with predictors identified predictors at age 3 years.

**Table 1.** Diagnostic and Statistical Manual of Mental Disorders: Depressive disorders

Disruptive mood dysregulation disorder
Major depressive disorder, single episode
Major depressive disorder, recurrent
Persistent depressive disorder (dysthymia)
Premenstrual dysphoric disorder
Substance/medication-induced depressive disorder
Depressive disorder due to another illness
Other specified depressive disorder
Unspecified depressive disorder

DMDD in children is characterized by chronic and severe irritability and emotional outbursts that are not proportionate or commensurate to the incident that provoked them. The DSM-5 emphasizes the chronic or persistent, rather than episodic, pattern of outbursts or irritable mood. This core feature differentiates DMDD from bipolar disorder. The intensity and persistence of outbursts distinguish children with DMDD from other children. Black and Andreasen (2014) pointed out that parents of patients with DMDD may report episodes of elevated mood in their child that are appropriate to the context (e.g., birthday celebration, trip to an amusement park) and their development level [1]. These emotionally positive episodes should not be mistaken for manic episodes to diagnose bipolar disorder. The diagnostic criteria for the diagnosis of DMDD, as provided by the DSM-5, are shown in Table 2.

## PREVALENCE

DMDD is frequently reported in patients consulting at child and adolescent psychiatric clinics, with boys

These factors include attention-deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), classification using the Child Behavior Checklist Profile, impaired communication with peers, temperament (high surgency, high negative affect, and low effortful control), lifelong substance use disorder in the parent, and increased parental hostility [3].

## COURSE AND OUTCOME

The prognosis of DMDD is not well understood, given the recent introduction of this diagnosis and significant challenges in the long-term followup of patients. Limited evidence suggests that children with DMDD are at increased risk of developing unipolar depression and anxiety in adulthood [1, 4].

In a followup study, Dougherty et al. assessed three-year outcomes of DMDD in 473 children aged 6 years [5]. Most children with a diagnosis of DMDD at 6 years were still diagnosed with DMDD until age 9 years. DMDD at age 6 years was also a significant predictor of ADHD, functional impairment, and peer

**Table 2.** Diagnostic and Statistical Manual of Mental Disorders: Diagnostic criteria for disruptive mood dysregulation disorder

<p>A. Severe recurrent temper outbursts manifested verbally (e.g., verbal rages) and/or behaviorally (e.g., physical aggression toward people or property) that are grossly out of proportion in intensity or duration to the situation or provocation.</p> <p>B. The temper outbursts are inconsistent with developmental level.</p> <p>C. The temper outbursts occur, on average, three or more times per week.</p> <p>D. The mood between temper outbursts is persistently irritable or angry most of the day, nearly every day, and is observable by others (e.g., parents, teachers, peers).</p> <p>E. Criteria A–D have been present for 12 or more months. Throughout that time, the individual has not had a period lasting three or more consecutive months without all of the symptoms in Criteria A–D.</p> <p>F. Criteria A and D are present in at least two of three settings (i.e., at home, at school, with peers) and are severe in at least one of these.</p> <p>G. The diagnosis should not be made for the first time before age 6 years or after age 18 years.</p> <p>H. By history or observation, the age at onset of Criteria A–E is before 10 years.</p> <p>I. There has never been a distinct period lasting more than 1 day during which the full symptom criteria, except duration, for a manic or hypomanic episode have been met.</p> <p>Note: Developmentally appropriate mood elevation, such as occurs in the context of a highly positive event or its anticipation, should not be considered as a symptom of mania or hypomania.</p> <p>J. The behaviors do not occur exclusively during an episode of major depressive disorder and are not better explained by another mental disorder (e.g., autism spectrum disorder, posttraumatic stress disorder, separation anxiety disorder, persistent depressive disorder).</p> <p>Note: This diagnosis cannot coexist with oppositional defiant disorder, intermittent explosive disorder, or bipolar disorder, though it can coexist with others, including major depressive disorder, attention-deficit/hyperactivity disorder, conduct disorder, and substance use disorders. Individuals whose symptoms meet criteria for both disruptive mood dysregulation disorder and oppositional defiant disorder should only be given the diagnosis of disruptive mood dysregulation disorder. If an individual has ever experienced a manic or hypomanic episode, the diagnosis of disruptive mood dysregulation disorder should not be assigned.</p> <p>K. The symptoms are not attributable to the physiological effects of a substance or another medical or neurological condition.</p>
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problems at age 9. Even after controlling for history of psychiatric diagnosis, children diagnosed with DMDD were more likely to need educational support services at age 9 years. These suggest that DMDD negatively affects the entire childhood stage and is a contributor to psychiatric and functional issues later in life, independent of comorbid mental disorders.

## COMORBIDITY AND DIFFERENTIAL DIAGNOSTICS

The introduction of DMDD in the DSM-5 fills in a huge gap in the diagnosis of mood disorders in children and provides an accurate diagnosis for patients with persistent and severe irritable moods and outbursts who were previously identified to have bipolar disorder [1, 4]. The DSM-5 acknowledges that DMDD was added in response to the 40-fold increase in bipolar disorder diagnoses in children made solely on the basis of mood swings from sadness to rage. Indeed, patients with DMDD differed significantly from patients with bipolar

disorder in terms of family history, sex predilection, clinical course, and outcomes. Importantly, patients with DMDD who were misdiagnosed with bipolar disorder developed symptoms limited to depressive features and associated with anger and irritability but did not experience mania or hypomania [1].

The core features of DMDD overlap with those of other psychiatric disorders in children and adolescents, including ODD, conduct disorder, ADHD, and anxiety disorders. According to the DSM-5, patients who meet the criteria for both DMDD and ODD should be diagnosed with DMDD.

In a population-based screening, 92% of children with symptoms of DMDD were diagnosed with ODD, while only 66% of children with ODD reported DMDD symptoms [6]. These indicate that DMDD symptoms are highly improbable in the absence of ODD, while ODD can exist without DMDD symptoms. Comorbid psychiatric diagnosis (anxiety, depression, conduct disorder, and ADHD) was not associated with an increased risk of DMDD symptoms

that could not be explained by ODD. Only 3% of these patients diagnosed with a psychopathology other than ODD developed symptoms of DMDD. These population-based findings were consistent with data from studies in psychiatric samples. These suggest that the symptoms of DMDD are inseparable from ODD, and a thorough evaluation of the DSM-5 criteria, including screening for comorbid psychiatric disorders, is warranted for the diagnosis of DMDD. These results also support the recommendation by the ICD-11 to classify DMDD symptoms as a specifier of ODD, rather than a distinct clinical diagnosis.

Due to the overlap with other diagnoses and increasing rates of medication in children and adolescents, the inclusion of DMDD in the DSM-5 has been criticized as having insufficient justification for the conceptualization of this new diagnosis [4].

## TREATMENT

Data on effective treatment approaches in DMDD are limited because this diagnosis appeared only 10 years ago and is only included by the DSM-5. Edelsohn and Abrischt (2022) reported antipsychotics were prescribed at higher rates in children with DMDD (58.9%) than those with bipolar disorder (51%). The authors anticipated that pharmacologic agent selection for this disorder (especially in comorbid cases) would be based on the prevailing symptoms rather than specific psychiatric diagnoses [7].

In a retrospective cohort study, Findling et al. (2022) reported that youth with DMDD were more likely to be prescribed an antipsychotic and to require hospitalization than those with bipolar disorder [8]. These findings could be due to the severity of symptoms in DMDD and its frequent comorbidity with other disorders [8].

Preliminary data suggest that a combination of aripiprazole and methylphenidate can improve symptoms in DMDD associated with ADHD [9]. However, randomized controlled trials are needed to confirm the efficacy and safety of this combination [9].

In comparison, psychosocial interventions with proven efficacy are available for patients with DMDD even though studies on these treatments are limited, show heterogeneity, and have low sample sizes [10]. Computerized psychotherapy employing interpretation bias training has shown potential in DMDD. This

intervention targets biases in perceiving the facial expressions of other individuals. In a small “fast-fail” randomized controlled trial of 44 patients with DMDD, computer-based interpretation bias training did not show efficacy in improving clinical outcomes [11]. However, the authors suggested other therapeutic prospects for this intervention.

It can be anticipated that prospective clinical guidelines for the management of DMDD will include antidepressants, mood stabilizers, and antipsychotics, as new trials report the efficiency and safety of these drugs in preventing and treating DMDD in children and adolescents. Second-generation antipsychotics may play an important role in DMDD psychopharmacology, and new drugs may be approved for this indication. Rational polypharmacy may be inevitable, given the high prevalence of comorbidity in this disorder. Nonetheless, psychotherapy and psychosocial support from families and schools (including preschools) will remain the mainstay of DMDD treatment.

In summary, DMDD is a new psychiatric diagnosis characterized by persistent and severe irritability and temper outbursts. Despite critical reactions to this clinical entity, the introduction of DMDD addresses a clinical reality in children and adolescents with mental health needs. There is a need to acknowledge that DMDD is a debilitating disorder that warrants further attention and study. Therefore, clinicians and specialists are encouraged to consider this diagnosis in their practice, and publishers of international guidelines and classification manuals are invited to consider the recognition of DMDD.

## ДОПОЛНИТЕЛЬНО

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## СПИСОК ИСТОЧНИКОВ

1. Black D.W., Andreasen N.C. *Introductory textbook of psychiatry*. Sixth edition. Arlington: American Psychiatric Publishing; 2014. 760 p.
2. Copeland W.E., Angold A., Costello E.J., Egger H. Prevalence, comorbidity, and correlates of DSM-5 proposed disruptive mood dysregulation disorder // *Am. J. Psychiatry*. 2013. Vol. 170. N. 2. P. 173–179. DOI: 10.1176/appi.ajp.2012.12010132.
3. Dougherty L.R., Smith V.C., Bufferd S.J. et al. DSM-5 disruptive mood dysregulation disorder: Correlates and predictors in young children // *Psychol. Med.* 2014. Vol. 44. N. 11. P. 2339–2350. DOI: 10.1017/S0033291713003115.
4. Bruno A., Celebre L., Torre G. et al. Focus on disruptive mood dysregulation disorder: A review of the literature // *Review Psychiatry Res.* 2019. N. 279. P. 323–330. DOI: 10.1016/j.psychres.2019.05.043.
5. Dougherty L.R., Smith V.C., Bufferd S.J. et al. Disruptive mood dysregulation disorder at the age of 6 years and clinical and functional outcomes 3 years later // *Psychol. Med.* 2016. Vol. 46. N. 5. P. 1103–1114. DOI: 10.1017/S0033291715002809.
6. Mayes S.D., Waxmonsky J.D., Calhoun S.L., Bixler E.O. Disruptive mood dysregulation disorder symptoms and association with oppositional defiant and other disorders in a general population child sample // *J. Child Adolesc. Psychopharmacol.* 2016. Vol. 26. N. 2. P. 101–106. DOI: 10.1089/cap.2015.0074.
7. Edelsohn G.A., Abright A.R. Editorial: Safer Use of Antipsychotics in Youth (SUAY): should treatment be guided by symptoms? // *J. Am. Acad. Child Adolesc. Psychiatry*. 2022. Vol. 61. N. 1. P. 34–36. DOI: 10.1016/j.jaac.2021.07.009.
8. Findling R.L., Zhou X., George P., Chappell P.B. Diagnostic trends and prescription patterns in disruptive mood dysregulation disorder and bipolar disorder // *J. Am. Acad. Child Adolesc. Psychiatry*. 2022. Vol. 61. N. 3. P. 434–445. DOI: 10.1016/j.jaac.2021.05.016.
9. Pan P.-Y., Fu A.-T., Yeh C.-B. Aripiprazole/Methylphenidate combination in children and adolescents with disruptive mood dysregulation disorder and attention-deficit/hyperactivity disorder: An open-label study // *J. Child Adolesc. Psychopharmacol.* 2018. Vol. 28. N. 10. P. 682–689. DOI: 10.1089/cap.2018.0068.
10. Waxmonsky J.G., Baweja R., Bansal P.S., Waschbusch D.A. A review of the evidence base for psychosocial interventions for the treatment of emotion dysregulation in children and adolescents // *Child Adolesc. Psychiatr. Clin. N. Am.* 2021. Vol. 30. N. 3. P. 573–594. DOI: 10.1016/j.chc.2021.04.008.
11. Haller S.P., Stoddard J., Botz-Zapp C. et al. A randomized controlled trial of computerized interpretation bias training for disruptive mood dysregulation disorder: A fast-fail study // *J. Am. Acad. Child Adolesc. Psychiatry*. 2022. Vol. 61. N. 1. P. 37–45. DOI: 10.1016/j.jaac.2021.05.022.

## REFERENCES

1. Black DW, Andreasen NC. *Introductory textbook of psychiatry*. Sixth edition. Arlington: American Psychiatric Publishing; 2014. 760 p.
2. Copeland WE, Angold A, Costello EJ, Egger H. Prevalence, comorbidity, and correlates of DSM-5 proposed disruptive mood dysregulation disorder. *Am J Psychiatry*. 2013;170(2):173–179. DOI: 10.1176/appi.ajp.2012.12010132.
3. Dougherty LR, Smith VC, Bufferd SJ et al. DSM-5 disruptive mood dysregulation disorder: Correlates and predictors in young children. *Psychol Med*. 2014;44(11):2339–2350. DOI: 10.1017/S0033291713003115.
4. Bruno A, Celebre L, Torre G et al. Focus on disruptive mood dysregulation disorder: A review of the literature. *Review Psychiatry Res*. 2019;(279):323–330. DOI: 10.1016/j.psychres.2019.05.043.
5. Dougherty LR, Smith VC, Bufferd SJ et al. Disruptive mood dysregulation disorder at the age of 6 years and clinical and functional outcomes 3 years later. *Psychol Med*. 2016;46(5):1103–1114. DOI: 10.1017/S0033291715002809.
6. Mayes SD, Waxmonsky JD, Calhoun SL, Bixler EO. Disruptive mood dysregulation disorder symptoms and association with oppositional defiant and other disorders in a general population child sample. *J Child Adolesc Psychopharmacol*. 2016;26(2):101–106. DOI: 10.1089/cap.2015.0074.
7. Edelsohn GA, Abright AR. Editorial: Safer Use of Antipsychotics in Youth (SUAY): should treatment be guided by symptoms? *J Am Acad Child Adolesc Psychiatry*. 2022;61(1):34–36. DOI: 10.1016/j.jaac.2021.07.009.
8. Findling RL, Zhou X, George P, Chappell PB. Diagnostic trends and prescription patterns in disruptive mood dysregulation disorder and bipolar disorder. *J Am Acad Child Adolesc Psychiatry*. 2022;61(3):434–445. DOI: 10.1016/j.jaac.2021.05.016.
9. Pan P-Y, Fu A-T, Yeh C-B. Aripiprazole/Methylphenidate combination in children and adolescents with disruptive mood dysregulation disorder and attention-deficit/hyperactivity disorder: An open-label study. *J Child Adolesc Psychopharmacol*. 2018;28(10):682–689. DOI: 10.1089/cap.2018.0068.
10. Waxmonsky JG, Baweja R, Bansal PS, Waschbusch DA. A review of the evidence base for psychosocial interventions for the treatment of emotion dysregulation in children and adolescents. *Child Adolesc Psychiatr Clin N Am*. 2021;30(3):573–594. DOI: 10.1016/j.chc.2021.04.008.
11. Haller SP, Stoddard J, Botz-Zapp C et al. A randomized controlled trial of computerized interpretation bias training for disruptive mood dysregulation disorder: A fast-fail study. *J Am Acad Child Adolesc Psychiatry*. 2022;61(1):37–45. DOI: 10.1016/j.jaac.2021.05.022.

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