A suicide attempt with long-acting methylphenidate in an adolescent with attention deficit hyperactivity disorder: Clinical management and a biopsychosocial approach

Nefise Busra Celebi[1], Mujdat Erarkadas[2], Nursu Cakın Memik[3]

[1]M.D., Bursa City Hospital, Clinic of Child and Adolescent Psychiatry, Bursa, Turkey https: //orcid.org/0000-0001-6266-330X
[2]M.D., Gölcük Necati Çelik State Hospital, Clinic of Child and Adolescent Psychiatry, Kocaeli, Turkey https://orcid.org/0000-0001-8263-9219
[3]Prof., Kocaeli University Faculty of Medicine, Department of Child and Adolescent Psychiatry, Kocaeli, Turkey https: //orcid.org/0000-0001-9029-3457

SUMMARY

Attention deficit hyperactivity disorder (ADHD) is a well-established risk factor for suicidal ideation, suicide attempts, and completed suicide. Methylphenidate, a first-line pharmacological treatment for ADHD, is being increasingly prescribed. Given the rising rates of methylphenidate use and the high prevalence of suicide among individuals with ADHD, it is anticipated that clinicians will increasingly encounter suicide attempts involving this easily accessible medication. However, there are limited case reports of suicide attempts involving methylphenidate in individuals with ADHD. In this case report, we present a comprehensive biopsychosocial evaluation of a 14-year-old adolescent girl with ADHD who attempted suicide by taking 900 mg of long-acting methylphenidate, while discussing potential underlying mechanisms and risk factors for suicidality. We also addressed the clinical management of high-dose methylphenidate ingestion in children and adolescents, a topic for which the literature provides limited guidance. This case highlights several risk factors for suicidal behavior in adolescents, including untreated ADHD, comorbid psychiatric disorder, dysfunctional family dynamics, emotional dysregulation, impulsivity, social stressors, academic difficulties, family history of suicide and inadequate coping mechanisms. Our findings emphasize the importance of sustained ADHD treatment, routine suicidality screening in adolescents with ADHD and providing psychoeducation for families. Suicidal behavior is a complex and multifactorial process shaped by the interaction of biological, psychological, and environmental factors. A multidisciplinary approach grounded in the biopsychosocial model is essential for effective assessment and intervention.

Key words: Attention deficit hyperactivity disorder, methylphenidate, suicide attempt, biopsychosocial model

INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is a common neurodevelopmental disorder in childhood, characterized by inattention, impulsivity, and hyperactivity (1). ADHD is rarely standalone and often comorbid with other psychiatric disorders (2). It has been linked to increased suicidal thoughts, attempts, and completed suicides, and is considered an independent risk factor for suicide (3-5).

Methylphenidate, the first-line pharmacological treatment for ADHD, is increasingly prescribed worldwide (6,7). In the United States, among individuals aged 0–19 years, methylphenidate is the most commonly reported agent in poison control exposures related to ADHD medications (8). However, no comparable national data exist for Turkey, representing a limitation, as patterns of medication use and overdose may vary across countries. Given the increasing use of methylphenidate and the high prevalence of suicide in ADHD, it is anticipated that clinicians will increasingly encounter suicide attempts involving this easily accessible medication. Although case reports of suicide attempts involving methylphenidate in individuals with ADHD exist, these are often discussed predominantly from a biological perspective (9-14). In this context, we present an adolescent with ADHD who attempted suicide with high-dose methylphenidate, discussed comprehensively from a biopsychosocial perspective, highlighting under-

DOI: 10.5505/kpd.2026.83479

Cite this article as: Celebi NB, Erarkadas M, Cakin Memik N. A suicide attempt with long-acting methylphenidate in an adolescent with attention deficit hyperactivity disorder: Clinical management and a biopsychosocial approach. Turkish J Clin Psych 2026; 29:151-156

The arrival date of article: 26.05.2025, **Acceptance date publication:** 21.10.2025

Turkish J Clinical Psychiatry 2026;29:151-156

This work is licensed under Creative Commons Attribution-NonCommercial NonDerivatives International License

lying mechanisms and risk factors for suicidal behavior in ADHD.

CASE

A 14-year-old girl was brought to the emergency department approximately an hour after ingestion of 25 tablets of 36 mg (900 mg) long-acting methylphenidate which works with an osmotic controlled release system (OROS). No nausea or vomiting occurred following the ingestion. Upon admission, she was conscious with stable vital signs, and physical examination, toxicology screening, and blood ethanol levels were unremarkable. She received activated charcoal (1 g/kg) and was discharged after 24 hours of observation, remaining asymptomatic with normal vital signs and laboratory results.

She reported ingesting a high dose of her prescribed medication following an argument with her boyfriend. Similarly, three months earlier, she had ingested 10 tablets of 36 mg (360 mg) OROS methylphenidate after an argument with her boyfriend. The patient, who had not been under regular ADHD treatment, used leftover prescribed methylphenidate stored at home. She stated that her aim in these suicide attempts was not to end her life but to upset her boyfriend, and expressed regret afterward. Both episodes were unplanned, emotionally driven, and consistent with impulsive behavior. No other suicide attempts or self-injurious behaviors were reported.

The patient's mother and father were primary school graduates, employed as cleaning staff and at a gas station, respectively. She had a 21-year-old sister who had attempted suicide by medication overdose following an argument with her boyfriend five years earlier. Although the patient did not witness the incident, her sister had shared the experience with her afterward. The sister had no psychiatric diagnosis or treatment at that time or afterward. There was no other family history of psychiatric illness or suicide. Family relationships were described as emotionally distant yet stable. Both sisters exhibited limited problem-solving skills and maladaptive coping with interpersonal stress, particularly in romantic relationships.

Pregnancy, labor, and postpartum were uneventful, and neuromotor milestones were achieved on time. There was no history of illness, accident or surgery. Her academic performance was poor. The patient had been involved in two school altercations resulting in legal cases. She reported occasional smoking and alcohol use with peers but denied substance abuse. Her first psychiatric evaluation occurred at age five following physically aggression toward a peer. At that time, she was diagnosed with ADHD. Although she did not attend regular follow-up, she occasionally used different methylphenidate formulations throughout her treatment.

In the psychiatric interview conducted in the emergency department, the patient presented as a female adolescent appearing her stated age, dressed appropriately for her socioeconomic status. She was conscious and fully oriented. No perceptual or memory defect was detected. Mood was euthymic, and affect was congruent with thought content. Speech rate and quantity were normal. Thought process was coherent and goal-directed, focusing on recent arguments with her boyfriend and regret over her suicide attempt. No current suicidal or homicidal thoughts were reported. During clinical evaluation, her intellectual functioning was observed to be consistent with mild intellectual disability (MID). The WISC-IV test administered during outpatient follow-up showed impairments in verbal comprehension (66), working memory (59), and processing speed (59), with borderline perceptual reasoning (72) and a full-scale IQ of 53.

According to DSM-5, intellectual disability requires not only low IQ but also significant impairments in adaptive functioning. In this case, academic underachievement (conceptual domain), impulsive and poorly regulated interpersonal behavior (social domain), and difficulties in daily living and legal problems (practical domain) together indicated clinically significant impairments in adaptive functioning. It is possible that untreated ADHD symptoms adversely affected attention, working memory, and processing speed, resulting in underestimation of true cognitive abilities. Based on the clinical history, cognitive testing, and adaptive functioning assessments (Children's Global Assessment Scale score: 55, indicating moderate impairment), the patient was diagnosed with

comorbid MID. No additional psychiatric comorbidities were identified according to DSM-5 criteria and psychometric assessments (Beck Depression Inventory: 7; State-Trait Anxiety Inventory: 28/30, both below clinical cut-off). The treatment plan included ADHD management, support tailored to MID, psychoeducation, and family training, together with multidisciplinary follow-up. Written informed consent was obtained from the patient and her parents to publish this manuscript.

DISCUSSION

Psychostimulants are first-line pharmacological treatment for ADHD (6). Methylphenidate accounts for nearly half of reported ADHD medication misuse, mostly in adolescents (8). Despite increasing ADHD diagnoses and stimulant prescriptions, epidemiological data on stimulant-related toxicity remain limited. A recent adult study reported 64 deaths associated with methylphenidate or (lis)dexamfetamine; 41 involved methylphenidate, about 20% were intentional, and mostly with polysubstance use and psychiatric comorbidity (15). While deaths are rare relative to prescription volume, caution is warranted in patients with psychiatric comorbidity, substance use, cardiovascular disease, or polypharmacy. This study provides the most contemporary evidence on stimulant-related mortality, however, focuses exclusively on adults. Adolescent-specific data remain limited, representing an important gap in the literature.

High doses of psychostimulants can cause hypertension, tachycardia, arrhythmia, hyperthermia, irritability, mood changes, hallucinations, and seizures. Hospitalization is advised for methylphenidate exposures exceeding 4 mg/kg or 120 mg (16). Induction of emesis is not recommended, and while no specific antidote exists, activated charcoal is advised. Benzodiazepines are indicated for agitation, dystonia, or seizures. In cases of respiratory depression, arrhythmias, or cardiac arrest, standard advanced cardiac life support protocols should be initiated. Emergency management should prioritize cardiovascular stabilization and neurological monitoring, followed by psychiatric evaluation and suicide risk assessment. If the patient remains stable and asymptomatic for 24 hours with normal laboratory results, discharge may be considered (16).

Methylphenidate exposures reported to poison control centers showed that only 31% of the cases developed symptoms—most commonly tachycardia, agitation, and lethargy—and none were severe or life-threatening (17). Moreover, in intentional ingestions, additional symptoms—including vomiting, dizziness, mydriasis, and tremor—have been reported. Consistent with these findings and previous case reports (9-14), no serious symptoms occured in our case despite ingestion of 900 mg of OROS methylphenidate. Both our case and those in the literature involved long-acting formulations, whose pharmacokinetic properties may influence overdose presentation (6). Evidence suggests that long-acting formulations generally cause mild or no adverse effects (16). Although long-acting methylphenidate appears safer acutely, its extended-release profile may prolong toxicity, necessitating extended observation. Overall, knowledge regarding high-dose methylphenidate effects remains largely case-based, underscoring the need for further research.

Although stimulants have been used for decades, concerns about methylphenidate's safety and its potential link to suicidality persist. Reports of suicide directly related to methylphenidate are rare and mostly limited to case studies. Large-scale cohort studies and meta-analyses indicate that stimulant treatment does not increase suicidality and may even reduce the risk of suicide attempts (18-20). Moreover, consistent long-term treatment has been linked to fewer suicide attempts (21), suggesting that concerns about increased suicide risk due to ADHD medications may be unwarranted. Given ADHD's high prevalence and strong association with suicidality, effective and sustained treatment may reduce suicide risk (2). In our case, the patient lacked consistent follow-up or medication, underscoring untreated ADHD as a potential contributor to suicidal behavior and the importance of treatment adherence.

A meta-analysis reported that ADHD increases the risk of suicide planning by 2.4 times, suicidal

ideation by 4.5 times, and completed suicides by 6.7 times (4). The present case, with repeated suicide attempts, underscores ADHD as a significant risk factor for suicidality. While this association is well established, the underlying factors remain unclear and likely reflect a complex interaction of biological, psychological, and social influences. Therefore, a comprehensive understanding of suicide risk requires evaluation through the biopsychosocial model (22).

ADHD is a neurodevelopmental disorder that leads to various structural, functional, and neurochemical brain alterations. Dysregulation of neurotransmitter systems—particularly dopamine, serotonin, and noradrenaline—contributes to impulsivity, and abnormalities have been identified in brain regions responsible for impulse control and emotional regulation (2). These neurobiological factors help explain difficulties in emotion regulation and impulse control. Impulsivity and poor response inhibition, core features of ADHD, are consistently associated with increased suicide risk (23). ADHD has been identified as an independent risk factor for suicidal ideation and attempts, regardless of comorbid psychiatric disorders, and is particularly associated with repeated suicide attempts (5,23). A cohort study further reported significantly elevated rates of suicidal ideation and completed suicides among individuals with untreated ADHD (24). Early diagnosis and appropriate pharmacological treatment appear to have protective effect on suicidal behavior, mainly by reducing impulsivity (22,25). Our case, diagnosed with ADHD but not receiving regular treatment and exhibited repeated impulsive suicide attempts, highlights the importance of comprehensive ADHD management and routine suicide screening, particularly in patients with poor treatment adherence.

Evaluating psychological factors is essential for understanding the underlying causes of suicidal behavior. Increased suicide risk in individuals with ADHD is primarily associated with comorbid disorders, such as depression, bipolar disorder, anxiety disorders, substance use disorders, personality disorders, autism spectrum disorders, and intellectual disability. Suicide risk is significantly elevated when these comorbidities remain undiagnosed or untreated (23). Our case also presents with comorbid ADHD and MID, both neurodevelopmental disorders. ADHD symptoms tend to be more severe in those with intellectual disability (26). However, knowledge regarding the clinical presentation and prevalence of ADHD in this population remains limited, as individuals with lower cognitive functioning are frequently excluded from research (26). Further studies focusing on this population are warranted to improve understanding and guide clinical practice.

Children with neurodevelopmental disorders often exhibit inadequate emotion regulation and rely on limited coping strategies when faced with emotional distress (27). In ADHD, these challenges are compounded by executive functioning deficits—working memory, cognitive flexibility, and planning—which hinder effective problem-solving and adaptive responses to stress (27). Our patient impulsively ingested a high dose of methylphenidate following an interpersonal conflict, illustrating how impaired emotion regulation and executive control may converge, leading to maladaptive behaviors. Notably, both suicide attempts occurred after arguments with her boyfriend, and she later expressed that the behavior was not motivated by suicidal intent but represented a maladaptive interpersonal problem-solving response. These findings highlight emotion regulation difficulties, impulsivity, and the use of suicidal behavior as a maladaptive coping strategy in response to interpersonal stress.

The patient's recurrent impulsive behaviors raise considerations regarding non-suicidal self-injury (NSSI), defined as deliberate self-harm without suicidal intent. In adolescents, NSSI is often linked to difficulties managing emotions, impulsivity, and limited coping strategies—all present in this case. Recognizing NSSI is clinically important, as repeated NSSI can exacerbate emotional dysregulation, interpersonal difficulties, and future suicide risk (28). These observations underscore the importance of interventions targeting emotion regulation and impulse control into treatment plans for adolescents with ADHD. Evidence-based interventions —such as cognitive-behavioral therapy, family-based interventions incorporating parent training, and adjunctive pharmacological options (e.g., antipsychotics for severe agitation or mood dysreg-

ulation) —may reduce the risk of repeated NSSI and provide structured coping mechanisms in emotionally charged situations (29). Early identification and management of comorbid psychiatric disorders remain essential to reduce future suicide risk (29). In this case, due to irregular follow-up and poor adherence, close monitoring and targeted pharmacological or behavioral interventions were not feasible. Nevertheless, psychoeducation and family training were provided to enhance coping strategies and mitigate future risk.

Familial and social factors play a significant role in suicidal behavior. Children with intellectual disability often experience academic difficulties, social exclusion, and interpersonal challenges, contributing to low self-esteem—a key factor associated with increased suicide risk (23). In our case, academic underachievement and peer relationships difficulties may have contributed to diminished self-esteem and served as triggers for suicide attempts. Family history of suicide is also linked to higher suicide risk among children with ADHD (23). Notably, the patient's sister had attempted suicide following a similar interpersonal conflict, suggesting maladaptive coping strategies within the family. Internalization of such dysfunctional patterns may have influenced the patient's response to emotional distress. Additionally, medication accessibility represents a significant risk factor for overdose and suicide attempts, particularly in adolescents with impulsive behavior and untreated ADHD. In this case, both suicide attempts involved methylphenidate previously prescribed and accessible at home, highlighting the role of medication access. Furthermore, familial and environmental factors, such as low socioeconomic status, limited parental education, unstable employment, and a family psychiatric history are well-established risk factors for suicide (23). In our case, both parents had low education levels and low-income jobs, indicating potential social vulnerabilities. Therefore, parents psychoeducation is crucial to raise awareness about the suicide risk. Families should be informed about limiting access to potentially harmful objects, including medications and sharp instruments, particularly in impulsive children. Physicians should emphasize secure drug storage and encourage parental supervision. Enhancing protective factors—such as social support and academic engagement—may serve as important buffers against suicide risk in this vulnerable population.

These clinical insights underscore the multifactorial nature of suicidal behavior in adolescents with neurodevelopmental disorders, shaped by biological, psychiatric, and social factors. Clinicians should be vigilant when treating this population, given their heightened vulnerability and limited coping skills. Preventive strategies—such as sustained ADHD treatment, early family psychoeducation, structured interventions targeting emotion regulation and impulsivity, and secure medication storage—may reduce suicide risk. Strengthening school-based support and integrating routine suicide risk screening into ADHD follow-up could facilitate early identification of high-risk individuals. Given the complexity of suicidal behavior, a multidisciplinary approach incorporating the biopsychosocial model is essential for effective assessment and intervention. Future interventions should combine pharmacological management with evidence-based psychosocial approaches that enhance coping skills and emotion regulation, providing a comprehensive framework for this vulnerable population. As suicide remains a leading cause of death among adolescents and young adults, further research is needed to clarify the link between ADHD and suicidality.

Correspondence address: M.D., Mujdat Erkarkadas, Gölcük Necati Çelik State Hospital, Clinic of Child and Adolescent Psychiatry, Kocaeli, Turkey mujdaterarkadas@hotmail.com

REFERENCES

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders: DSM-5. Arlington, VA: American Psychiatric Publishing, 2013.

2. Biederman J, & Faraone, S.V. (2005) Attention-deficit hyperactivity disorder. The Lancet 2005; 366(9481):237-248. https://doi.org/10.1016/j.biopsych.2004.10.020

3. Balazs J, Kereszteny A. Attention-deficit/hyperactivity disorder and suicide: A systematic review. World journal of psychiatry 2017; 7(1):44. https://doi.org/10.5498/wjp.v7.i1.44

4. Septier M, Stordeur C, Zhang J, Delorme R, Cortese S. (2019). Association between suicidal spectrum behaviors and attention-deficit/hyperactivity disorder: a systematic review and meta-analysis. Neuroscience & Biobehavioral Reviews 2019; 103:109-118. https://doi.org/10.1016/j.neubiorev.2019.05.022

5. Huang KL, Wei HT, Hsu JW, Bai YM, Su TP, Li CT, Lin WC, Tsai SJ, Chang WH, Chen TJ, Chen MH. Risk of suicide attempts in adolescents and young adults with attention-deficit hyperactivity disorder: a nationwide longitudinal study. The British Journal of Psychiatry 2018; 212(4):234-238. https://doi.org/10.1192/bjp.2018.8

6. Huss M, Duhan P, Gandhi P, Chen CW, Spannhuth C, Kumar V. Methylphenidate dose optimization for ADHD treatment: review of safety, efficacy, and clinical necessity. Neuropsychiatric disease and treatment 2017; 1741-1751. https://doi.org/10.2147/NDT.S130444

7. Bachmann CJ, Wijlaars LP, Kalverdijk LJ, Burcu M, Glaeske G, Schuiling-Veninga CC, Hoffmann F, Aagaard L, Zito JM. Trends in ADHD medication use in children and adolescents in five western countries, 2005-2012. European Neuropsychopharmacology 2017; 27(5):484-493. https://doi.org/10.1016/j.euroneuro.2017.03.002

8. King SA, Casavant MJ, Spiller HA, Hodges NL, Chounthirath T, Smith GA. Pediatric ADHD medication exposures reported to US poison control centers. Pediatrics 2018; 141(6). https://doi.org/10.1542/peds.2017-3872

9. Fettahoglu EC, Satilmis A, Gokcen C, Ozatalay E. Oral megadose methylphenidate ingestion for suicide attempt. Pediatric International 2009; 51:844–845. 10.1111/j.1442-200X.2009.02929.x

10. Klampfl K, Quattländer A, Burger R, Pfuhlmann B, Warnke A, Gerlach M. Case report: intoxication with high dose of long-acting methylphenidate (Concerta(®)) in a suicidal 14-year-old girl. ADHD Attention Deficit and Hyperactivity Disorders 2010; 2:221-224. https://doi.org/10.1007/s12402-010-0032-0

11. Ozdemir E, Karaman MG, Yurteri N, Erdogan A. A case of suicide attempt with long-acting methylphenidate (Concerta). ADHD Attention Deficit and Hyperactivity Disorders 2010; 2:103-105. https://doi.org/10.1007/s12402-010-0026-y

12. Murat, D, Arman A. Suicidal attempt with high dose long-acting methylphenidate: a case report. Marmara Medical Journal 2013; 26(3):165–167. 10.5472/MMJ.2013.02663.1

13. Kilicoğlu AG, İpek H, Mutlu C, Doğan H, Avci A, Erdoğan A. 3240 mg long acting methylphenidate intake for suicide attempt. Anatolian Journal of Psychiatry 2014; 15: S1. https://doi.org/10.5455/apd.40639

14. Eryilmaz G, Gul IG, Yorbik O, Isiten N. Long-acting methylphenidate toxicity: a case report. Bulletin of Clinical Psychopharmacology 2014;24(4): 384-386. https://doi.org/10.5455/bcp.20140709015737

15. Darke S, Peacock A, Duflou JA, Farrell M, Lappin J. Methylphenidate and (lis)dexamfetamine toxicity-related deaths of adults, Australia, 2000-24: analysis of NCIS data. The Medical journal of Australia 2025; 222(5):259-261. https://doi.org/10.5694/mja2.52604

16. Scharman EJ, Erdman AR, Cobaugh DJ, Olson KR, Woolf AD, Caravati EM, Chyka PA, Booze LL, Manoguerra AS, Nelson LS, Christianson G, Troutman WG. American Association of Poison Control Centers. Methylphenidate poisoning: an evidence-based consensus guideline for out-of-hospital management, Clinical Toxicology 2007; 45(7):737-752. https://doi.org/10.1080/15563650701665175

17. White SR, Yadao CM. Characterization of methylphenidate exposures reported to a regional poison control center. Archives of pediatrics & adolescent medicine 2000; 154(12):1199-1203. 10.1001/archpedi.154.12.1199

18. Chang Z, Quinn P D, O'Reilly L, Sjölander A, Hu, K, Gibbons R, Larsson H, D'Onofrio BM. Medication for attention-deficit/hyperactivity disorder and risk for suicide attempts. Biological psychiatry 2020; 88(6):452-458. https://doi.org/10.1016/j.biopsych.2019.12.003

19. Kim JH, Park S, Lee YJ. Systematic review of suicidal behaviors related to methylphenidate and atomoxetine in patients with attention deficit hyperactivity disorder. Journal of the Korean Academy of Child and Adolescent Psychiatry 2023; 34(2):125. https://doi.org/10.5765/jkacap.220040

20. Liu WJ, Mao HJ, Hu LL, Song MF, Jiang HY, Zhang L. Attention-deficit/hyperactivity disorder medication and risk of suicide attempt: A meta-analysis of observational studies. Pharmacoepidemiology and drug safety 2020; 29(11):1364-1372. https://doi.org/10.1002/pds.5110

21. Liang SH, Yang YH, Kuo TY, Liao YT, Lin TC, Lee Y, McIntyre RS, Kelsen BA, Wang TN, Chen VC. Suicide risk reduction in youths with attention deficit/hyperactivity disorder prescribed methylphenidate: A Taiwan nationwide population-based cohort study. Research in developmental disabilities 2018; 72:96-105. https://doi.org/10.1016/j.ridd.2017.10.023

22. Arun P, Das S. Methylphenidate and Suicide. In Neuropathology of Drug Addictions and Substance Misuse. Academic Press 2016; p:692-698. https://doi.org/10.1016/B978-0-12-800634-4.00069-X

23. Austgulen A, Skram NKG, Haavik J, Lundervold AJ. Risk factors of suicidal spectrum behaviors in adults and adolescents with attention-deficit / hyperactivity disorder – a systematic review. BMC Psychiatry 2023; 23(1):612. https://doi.org/10.1186/s12888-023-05099-8

24. Hurtig T, Taanila A, Moilanen I, Nordström T, Ebeling H. Suicidal and self-harm behaviour associated with adolescent attention deficit hyperactivity disorder-a study in the Northern Finland Birth Cohort 1986. Nordic Journal of Psychiatry 2012; 66(5):320-328. https://doi.org/10.3109/08039488.2011.644806

25. Lichtenstein P, Halldner L, Zetterqvist J, Sjölander A, Serlachius E, Fazel S, Långström N, Larsson H. Medication for attention deficit-hyperactivity disorder and criminality. New England Journal of Medicine 2012; 367(21):2006-2014. 10.1056/NEJMoa1203241

26. Lindsey M. Comprehensive health care services for people with learning disabilities, Advances in psychiatric treatment 2002; 8(2):138-147. https://doi.org/10.1192/apt.8.2.138

27. Predescu E, Sipos R, Costescu CA, Ciocan A, Rus DI. Executive Functions and Emotion Regulation in Attention-Deficit/Hyperactivity Disorder and Borderline Intellectual Disability. Journal of clinical medicine 2020; 9(4):986. https://doi.org/10.3390/jcm9040986

28. Gillies D, Christou MA, Dixon AC, Featherston OJ, Rapti I, Garcia-Anguita A, Villasis-Keever M, Reebye P, Christou E, Al Kabir N, Christou PA. Prevalence and characteristics of self-harm in adolescents: meta-analyses of community-based studies 1990–2015. Journal of the American Academy of Child & Adolescent Psychiatry 2018; 57(10):733-741. https://doi.org/10.1016/j.jaac.2018.06.018

29. Glenn CR, Franklin JC, Nock MK. Evidence-based psychosocial treatments for self-injurious thoughts and behaviors in youth. Journal of Clinical Child & Adolescent Psychology 2015; 44(1):1-29. https://doi.org/10.1080/15374416.2014.945211