

## Depression of Children and Adolescents

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### ABSTRACT

Depression in childhood and adolescence is still less well known than depression in adults. The term "childhood and adolescent depression" for depression in childhood and adolescence was not used until 1966 and was studied in these age groups mainly by psychoanalysts, psychiatrists and developmental psychologists. Unfortunately, the results of their research are not homogeneous, but they show that it increases with age. Juvenile depression is a separate symptom that includes mood

disorders, behavioral disorders, anxiety and self-destructive behavior. It differs from adult depression in terms of its course, and it lasts shorter and has a duration a different psychopathological picture. In the article, the available literature was reviewed and, based on the results obtained, the problem was developed in division into sections: epidemiology, etiopatogenesis, clinical grounds, socialmedia and depression.

Keywords: Depression, childhood, adolescence

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## INTRODUCTION

Depression in childhood and adolescence is still less well-known than depression in adults. The term "childhood and adolescent depression" for depression in childhood and adolescence was not used until 1966 and was studied in these age groups mainly by psychoanalysts, psychiatrists, and developmental psychologists [1].

Unfortunately, the results of their research are not homogeneous, but they show that it increases with age [1].

Juvenile depression is a different symptom that includes mood disorders, behavioral disorders, anxiety, and self-destructive behavior. It differs from adult depression in terms of its course, and also in that it lasts shorter and has a duration a different psychopathological picture [2].

Kępiński, after Jundziłł [3] and after Cwikliński [2] divides it into four distinct characters:

- apathetic and abusive - young people cannot cope with life crises
- mi, they cannot mobilize themselves to the effort to unravel
- the problem, they lose their willingness to learn, they do not care about their outward appearance;
- rebellious - manifested by passive resistance and opposition the demands of the environment, and anger;
- resignation - where its main reason is the lack of self-confidence, it arises as a result of a discrepancy in the fulfillment of needs between the reality and dreams about it. The future is seen as gray, boring, with no chance of success;
- labile - in which the lives of young people are made difficult by instability moods, depressive phases with a short time interval

In turn, Bomba, for Rola [4] i za Cwikliński [2] believes that depression in adolescents can manifest as one of four distinct psychological syndromes, in the form of depression:

- clean - in which the typical symptom is low mood, weakness in psychomotor drive, and undefined fear of the future;
- with resignation - where apart from the above symptoms, there are also learning failures, a sense of meaninglessness in life, as well as thoughts, tendencies, and attempts to take one's own life;
- anxious - expressed as mood swings and self-destructive behavioral disorders;
- hypochondriac - manifested by an association of symptoms of pure depression with the somatic manifestation of anxiety, as well as hypochondriac focus on the body.

## EPIDEMIOLOGY

It is estimated that 1% of preschool children over 2 and 3 years of age suffer from clinical depression, 2% of children 6-12 years old, and more than 20% below 18 years of age [5].

In the opinion of Lewinsohn et al. [6] by 18, up to 20% of adolescents may experience major depressive disorder (MDD). In turn, studies by Jellink and Snyder showed that MDD remains at 1-2% among children in the prepubertal period. Moreover, among adolescents, it increases to the level of 5-8%, which may suggest that the risk of developing the disease increases with age and adolescence Sexual [7].

According to Burmaher et al., 30-70% of children who experienced the first episode of depression will experience a second (or subsequent) episode in childhood, adolescence or adulthood [8].

In childhood, the same number of girls as boys suffer from depression, and in adolescence, twice as many girls - there are gender differences: in childhood, the ratio between boys and girls is 1: 1 (although some studies show that depression is more common at this age). in boys), and in adolescence - 1: 2 [9-14].

The so-called major depression episode lasts about 7 to 9 months, as in adults. Dysthymia (the intensity of depressive symptoms is lower) - lasts at least a year, on average four years. Unfortunately, nearly 70% of children diagnosed with dysthymia also develop an episode of major depression after two or three years of illness - it is then referred to as "double depression", significantly worsening the prognosis [9-14].

Studies of adolescents diagnosed with depression show that in 40% of cases, within 3-5 years, another episode occurs, and 30-70% of children who have experienced the first episode of depression suffer the second (or subsequent) time in childhood, adolescence or in adulthood [5]. The early onset of depression is believed to be a harbinger of a chronic disorder that will continue from childhood through adolescence to adulthood [9-14]. Ravens-Sieberer et al [15] estimate that 24% of adolescents suffer from anxiety disorders (about 14% before the pandemic), and over 60% of children and adolescents may struggle with depression. other studies found that

- report that one-third of 3- to 18-year-old children and adolescents were clingy, inattentive, irritable and worried (Jiao et al. 20020) [16]
- found that 23% of second- to 6th-grade children had depressive symptoms and 19% had anxiety symptoms during the pandemic (Xie et al. 2020) [17]
- report that 44% of 12- to 18-year-olds displayed depressive symptoms, 37% showed

anxiety, and 31% had both types of symptoms while (Zhou et al. 2020) [18]

- high levels of depressive and anxiety symptoms were recently replicated by (Duan et al. 2020) [19]
- two non-representative studies from India with children and adolescents aged 5–18 years (Yeasmin et al 2002; Saurabh et al. 2020) [20,21]
- one study from Brazil with children and adolescents from 6 to 12 years underline the negative impact of the pandemic on the mental health of children (Garcia de Avila et al 2020) [22]
- they found that children and adolescents experienced severe psychological distress, such as worries, helplessness, anxiety, and fear. Moreover, recent nationwide studies from the US reported worsening psychological well-being and behavioural health of children and adolescents compared to the time before the pandemic (Patrick et al 2020; Gassman-Pines et al 2020) [23,24]
- two European studies from Italy and Spain found that irritability, and loneliness in children and adolescents increased during the COVID-19 lockdown (Ezpeleta et al. 2020; Orgilés et al 2020) [25,26] and one non-representative survey among parents of German children and adolescents (Langmeyer et al 2020) [27].

## ETIOPATHOGENESIS

The causes of clinical depression should be taken into account when considering the causes of depression [5,9-14, 28-31]:

- genetic factors - the risk of depression in children whose biological parents suffered from this disorder ranges from 15% to 45%, even if the child was adopted by a family without depression. If one of the monozygotic twins is depressed, the other is also at 70% risk of developing the disorder.
- biochemical processes in the brain
- the influence of the family atmosphere, including the abuse of alcohol or other psychoactive substances by family members, domestic violence, chronic illness of one of the parents, another family member or the child himself, loss of a loved one due to death or, for example, parents' divorce, mental and physical situations or sexual abuse by caregivers, chronic marital conflict of parents, neglect, lack of interest, hostility and emotional rejection, excessive parental control, overburdening the child with too much responsibility (child-parent change of roles), difficult financial situation and social isolation of the family,
- the influence of the external environment - the social environment, stress caused by the child's

school situation, including, for example, excessive demands made by teachers, the atmosphere of tension, hostility, lack of support, etc. in school or class, peer violence by teachers, school failures (e.g., failed exam), unfair grading

- low self-esteem - a depressive child will explain negative, difficult events with its own constant properties, and thus it will judge self in an overly critical way.

It is believed that they have a particularly strong influence on relapses, three factors - mental illness of one of the parents, domestic violence and divorce of the parents [5,9-14, 28-31].

A particular period in human development is adolescence - the time of great changes that occur both in a teenager's body and psyche. The young man stands in front of the so-called development tasks that include [32]:

- acceptance of the changing appearance - there is probably no teenager who would not experience difficulties in this regard,
- confronting the current image of oneself with reality - is usually a source of disappointment and frustration,
- answer the question "who am I", establishing an emotional relationship with yourself
- defining your sexual identity (perceiving yourself as a woman or a man) and sexual orientation (sexual attraction to people of a certain gender),
- taking up new social roles (e.g. "girlfriend/boyfriend", i.e. a partner in an emotional relationship with another person) and greater responsibility within the already performed roles (e.g., a student), - "finding yourself" in the peer group,
- emotional separation from parents, often combined with experiencing fear and guilt towards them,
- setting goals in life, often combined with concerns about whether they will be achieved,
- establishing your system of values and beliefs.

## CLINICAL GROUNDS

Symptoms of depression are similar to those of adult [9-14,33,34]:

- auto-aggressive actions, e.g., self-harm (deliberately damaging your body by cutting yourself with sharp objects, burning yourself with a lighter, a cigarette, drama-ladies, biting and the like), deliberately inflicting pain on yourself, taking excessive drugs to "poison yourself, "(But not to take his own life),
- thoughts of resignation ("life is meaningless", "what am I living for"), fantasies about death ("what would happen if I died?", "Others would be better if I was not there"),

- suicidal thoughts (thinking, fantasizing about taking one's own life), suicidal tendencies (planning or making preparations to commit suicide), and in extreme cases - suicide attempts, i.e., taking direct actions aimed at taking one's own life,
- excessive fatigue,
- excessive reaction to comments and criticism - the child reacts with despair or great anger even when it is brought to his attention in a very delicate way and it concerns a trivial matter,
- excessive guilt,
- low self-esteem,
- limiting or ceasing activities that were previously important or pleasant for the child (e.g. play, hobbies, meeting peers), as well as reluctance to take up daily duties or abandoning them altogether. The child may, for example, refuse to get up in the morning, go to school, leave the house, and in extreme cases - from his room, neglect personal hygiene, education, and the like,
- a feeling of helplessness, hopelessness, meaninglessness in life - depressive thinking ("everything is pointless", "I'm going to be fine anyway"), low self-esteem ("I'm hopeless, worse, unattractive, stupid" /and"); disproportionately pessimistic assessment of reality, own abilities, future,
- a feeling of being useless, unnecessary; excessive self-blame even for those events and circumstances that are beyond our control (e.g., blaming oneself for a conflict between parents),
- taking impulsive, reckless actions ("I do not care about anything anyway"); drinking alcohol, using other psychoactive substances (drugs, "legal highs") - often to relieve anxiety, tension, sadness,
- sadness, depression, tearfulness; in children and adolescents, unlike adults, irritability is very often dominant; the child easily gets angry or despairing, can demonstrate hostility towards the environment - behaves in a way that is repulsive, discouraging contact,
- drop in energy, feeling bored and discouraged,
- a feeling of anxiety, internal tension; often depressive disorders are accompanied by anxiety - almost constant, of constant intensity, undefined - it is difficult to indicate the cause or object of such anxiety ("I do not know what I am afraid of"),
- in severe cases of depression, psychotic symptoms may occur (characterized by an incorrect, distorted experience of reality): hallucinations (or hallucinations), most often auditory, less often visual and olfactory and/or delusions (false beliefs about oneself and/or The content of these symptoms is consistent with a depressed

mood. Hallucinations take the form of, for example, a voice criticizing the behavior and actions of the sick person, convincing about his guilt, uselessness, or even ordering him to mutilate or kill himself; less frequently, they include visions of destruction, catastrophe, or the smell of death and decay. Delusions often refer to guilt, sinfulness, waiting for punishment, impending doom, and cataclysm. Psychotic symptoms in the course of depression in children are rare, but may occur in adolescents,

- withdrawing from social life, limiting contact with peers,
- increase or decrease in appetite,
- concentration disorders and difficulties with remembering - often result in learning problems and a deterioration in school performance, the child may miss lessons,
- psychomotor agitation, often resulting from the experienced fear and tension - the child fidgeting, cannot focus on a specific activity, takes unwise and pointless actions, e.g., nibbles at clothes, erases a piece of paper with a pen, biting nails,
- taking up some activities in excess - e.g., playing on the computer, watching TV,
- increase or decrease in appetite and, consequently, changes in body weight,
- sleep problems: difficulty falling asleep, waking up at night, waking up early in the morning, excessive sleepiness
- change in sleep pattern (persistent difficulty in falling asleep or waking up early, e.g. around four or five in the morning)
- changes in psychomotor activity - slowing down or agitation,
- indifference, apathy, reduction, and even loss of the ability to experience joy; the child stops enjoying things or events that previously made him happy,

Behavior that is typical of depression is considered to be [9-14]:

- changes in the eating pattern,
- changes in sleep patterns,
- difficulties in the functioning of the school, e.g., more frequent delays, increased absenteeism, especially skipping the first lesson, avoiding lessons during which tests are seen, withdrawal from active participation in lessons, frequent lack of preparation for lessons
- difficulties in sitting still, restless twirling, manipulative anxiety, e.g. pulling or twisting hair, picking skin, garments, or other objects,
- general psychomotor slowing down,
- monotonous, often very quiet, and meager way of speaking;
- sudden outbursts of anger,
- frequent complaints,

- resentment or irritability that is difficult to explain;
- increased tearfulness;
- visible signs of tension, anxiety, and fear;
- refusal to cooperate, anti-social behavior;
- reaching for alcohol and drugs;
- complaints of pain in various parts of the body, e.g. head, arms, legs, abdomen, despite the lack of a somatic cause.

In the group of children and adolescents, depression quite often takes an atypical (atypical) picture. The following comes to the fore: persistent somatic ailments, very often leading to numerous and thorough medical tests, as a result of which it is impossible to find organic causes of these symptoms, e.g., abdominal pain, nausea, vomiting, diarrhea, headaches, palpitations, shortness of breath, frequent fainting or fainting, night wetting - this image of depression is more common in children and rebellion against parents, school, non-compliance with the rules, aggressive and auto-aggressive behavior - this image of depression is more common among adolescents. Younger children, more often than adolescents and adults, may complain of physical symptoms and react more often with irritability. In turn, older children may experience helplessness, hopelessness or guilt more often [9-14].

A characteristic feature of childhood and adolescent depression is a high comorbidity rate. Anxiety disorders are the most common comorbidities of depression. It has been shown that 30-75% of children with depression also meet the diagnostic criteria for anxiety disorders [9-14]. In boys with depression, behavioral disorders and ADHD are more frequently observed. The literature on the subject hypothesizes that anxiety disorders and depression may have a common ground, and the early onset of anxiety disorders is a risk factor for the development of depression [cyt. za 9]. Other disorders comorbid with depression are the so-called externalizing disorders, including conduct disorder (CD), oppositional defiant disorder (ODD), attention deficit hyperactivity disorder (ADHD) and substance use disorders [9-14]. Some studies and family studies find that depression and ADHD may be related to this subsequent genetic predisposition [9-14]. In younger children with depression, suicidal thoughts are less likely to turn into specific plans and attempts to implement them. In contrast, adolescents risk of attempting suicide is less frequent [9-14]. Thoughts of suicide occur in most depressed children, but fortunately, they rarely become a reality before adolescence. However, between the ages of 15 and 19, the risk of suicide increases significantly [9]. The data of the Empowering Children Foundation [35] showed that almost every third respondent (30.8%) found that during the pandemic, his well-being deteriorated, every fifth (18%) said that it improved. Almost half of the respondents (47.6%) did not notice

a change at that time. Girls complained of worse well-being significantly more often than boys (36.5% vs. 25.4%,  $p < 0.05$ ). Every eleventh respondent (9.2%) admitted that he had mutilated himself in his life. Almost half (47.8%) of these people say that in the first period of the pandemic it happened less frequently than before. 4.4% of respondents injured themselves more often than before the pandemic, while 6.5% began to injure themselves on purpose. 28.3% of the respondents who mutilated themselves did not want to answer the question about mutilation in the studied period. In the first period of the pandemic, 2.9% of respondents aged 15-17 tried to commit suicide [35].

Police statistics for 2020 show that this year was a record year regarding the number of juvenile self-murders - 116 children took their own lives. Data from the Police Headquarters from less than 2021 to 2020 shows that there were almost 500 more homicide attempts last year. According to statistics, in 2020, police officers recorded 843 suicide attempts among children and adolescents aged 7 to 18, of which 538 concerned girls and 305 – boys. In the case of girls aged 7 to 12, police officers recorded 18 attempts in 2020, and in the age range from 13 to 18 years - 520. In the case of boys aged 7 to 12, there were 11 such attempts, and in boys aged 13-18 - 294. In 2020, 41 girls and 66 boys died due to suicide attempts. In 2019, police officers recorded 951 suicide attempts among children and adolescents across the country. Six hundred thirty-eight samples were for girls between 7 and 18 years of age and 313 for boys of the same age range. In 2019, 33 girls and 65 boys died as a result of suicide attempts [36].

Apart from depression, factors that may intensify suicidal tendencies are considered [9-14]:

- stressful circumstances, such as a strong family conflict, experience of rejection or humiliation (e.g., failure in a critical area, breaking up with sympathy),
- an increased feeling of helplessness or rage,
- favorable circumstances, e.g., easy availability of drugs.

In many cases, parents, colleagues or teachers do not even suspect that their child, friend or student is about to attempt suicide [9-14]. Situations should alert the child when [9-14]:

- gathers or prepares resources that can be used to take his own life (tablets, razor blades, rope, etc.).
- has problems sleeping and eating,
- speaks directly about the will to take one's own life or suggests it in a less direct way (e.g., "I would like to be dead", "others would be better without me"),
- organizes his affairs, gives away his belongings, says goodbye to his relatives and friends,
- its experience is dominated by sadness, a sense of hopelessness,

- expresses interest in the subject of death and dying,
- there is a sudden change in his behavior and functioning,
- begins to withdraw from peer life,
- neglects its appearance,

The following factors increase the risk of attempting suicide [9-14]:

- easy access to resources that can be used to take one's own life (e.g. weapons, drugs),
- previous suicide attempts,
- an unpleasant or difficult experience that the child has just had (rejection by peers, loss of a loved one, failure at school, etc.).
- family suicides,
- tendency to impulsive reactions and behaviors,
- the use of psychoactive substances,
- difficult family and financial situation.

## **SOCIAL MEDIA AND DEPRESSION**

In 2013-2015, Shakya from the University of California and Christakis from Yale University conducted an interesting experiment with 5,208 people [37]. The satisfaction level with life and interpersonal relations was checked in it, depending on the intensity of activity on Facebook. The results of more than two years of observation leave no illusions - interactions in the real world gave the respondents much more joy than on the Internet. On the other hand, very active, long-lasting use of Facebook significantly lowered mood and self-esteem, but the cause of this exciting dependence was not discovered. A great danger related directly to this portal activity is also a decrease in self-esteem.

Significantly people sensitive to the opinion of others, who attach great importance to being famous and appreciated, may fall into the trap of "likes". When a small number of people like or comment on our posts, their mood deteriorates significantly. In addition, viewing your friends' activities is a great opportunity to compare yourself with them. If in our opinion, we perform weaker than our colleagues in this comparison, our self-esteem may drop sharply. Attaching too much importance to what we see and do through social networks, lack of distance, and sensitivity to the opinion of others can contribute to the development of internet depression [37].

A study by Aalbers et al [38] from the University of Amsterdam argues that passive use of social networks causes symptoms of depression such as loneliness and fatigue. Currently, using a smartphone to "do something" when, for example, we are taking a bus, we have a break from work, or we cannot fall asleep, it has become a completely normal phenomenon. Usually, smartphone users passively use social networks, i.e., they browse news

boards, photos, or information of the day. This behavior is called passive social media use (PSMU). This safe behavior is the cause of much controversy in the scientific world. Some researchers attribute the PSMU to an unfavorable effect on the psyche of its users, arguing that it worsens their mood and deprives them of a sense of belonging and overall satisfaction with life. To investigate the correlation between the occurrence of depression symptoms and social networking sites, Dutch scientists used a tool in the form of an application. The study was conducted on 125 students at the University of Amsterdam, and its duration was two weeks. A special application installed on the smartphone of each participant of the experiment encouraged them to use the Internet and fill in a questionnaire on depression symptoms. It consisted of twelve elements, and its results were analyzed using statistical methods. Although the analysis of this questionnaire did not show a relationship between the length of time spent passively browsing social networking sites and the occurrence of depression, it was proved that there is a strong correlation between malaise and a higher frequency of PSMU. There is an assumption that people who have problems with concentration, are tired, and feel lonely passively browse social networks much more often. Perhaps it is a vicious circle phenomenon [38].

Kelly et al. [39] about two-fifths of the surveyed girls spend more than three hours daily using social media. Among boys, it is only one-fifth. About 10% of the surveyed boys said they do not use social media. By comparison, only 4% of the girls surveyed do not use apps such as Instagram and Snapchat. The researchers also found that 38% of those who use social media intensively exhibit symptoms of severe depression. Researchers see the reason that around 40% of the girls surveyed have experienced online harassment, compared to only 25% of boys. The article also revealed that 40% of girls reported sleep problems, while only 28% of boys reported a similar problem [39].

## **SUMMARY**

Depression is an insidious disease, the consequences of which, if left untreated, can be severe for the mental and physical condition. Moreover, it often takes a chronic form, returning several times during its lifetime. The study "Epidemiology of psychiatric disorders and the availability of psychiatric health care in EZOP - Poland" found that in min. 3% of the Polish population in the youngest and working age, as well as among the elderly, have experienced at least one depressive episode of any severity during their previous life [40].

A teenager is faced with very dynamic changes: he begins to perceive the world differently, has different desires and needs than before, and in

addition, experiences a hormonal storm, under the influence of which violent mood swings occur. Strong, extreme emotions torment a young person. He realizes that the world of adults is unfair and complicated, and he ceases to trust existing authorities. He is afraid of what his future will look like. He rebels against the patterns that limit him, feels misunderstood, and feels that his surroundings require too much of him. He would like to have as much freedom as possible while his parents and teachers place increasingly high expectations on him. He cares about the approval of his peers, and getting it is not easy: it usually depends on the material status, having fashionable clothes and expensive gadgets, beauty, and physical fitness. For a teenager, being laughed at by friends is a real drama, and such an event alone can make him break down. The reason for such violent reactions is not only hormonal changes but also not fully developed nervous systems and little life experience that would allow us to look at some issues from the proper perspective. Depression - if a sudden, traumatic event does not cause it - usually develops slowly. If left untreated, it will not disappear on its own but will only get worse and may lead to many serious, negative consequences, in extreme cases, even to the patient's death. Depression is not a problem only for adolescents in an objectively difficult life situation - it also affects adolescents from the so-called "Good houses". If you notice its symptoms in your child, you should not ignore them under any circumstances - untreated mood disorders very often lead to various diseases and even attempt suicide.

A population-based cohort study was conducted using Swedish national registers containing data on all individuals born in Sweden between 1982 and 1996 [41]. A total of 1 487 964 participants were followed up from age five through 2013 if no censoring occurred. Data analysis was performed from January 15, 2019, to August 10, 2020. This study examined 69 somatic conditions diagnosed after youth depression and all-cause and cause-specific mortalities. Overall and sex-specific hazard ratios (HRs) and 95% CIs were estimated using Cox proportional hazards regression with attained age as underlying timescale and time-varying exposure and adjusted for birth year and sex. All analyses were repeated, controlling for psychiatric comorbidities. Of 1 487 964 individuals included in the analysis, 51.2% were male. A total of 37 185 patients (2.5%; 67.4% female) had an inpatient or outpatient contact for depression between ages 5 and 19 years of age at first recorded diagnosis of depression. Age at the end of follow-up ranged between 17 and 31 years. Individuals with youth depression had higher relative risks for 66 of the 69 somatic diagnoses. Significant associations were observed for specific injuries, especially self-harm in females, sleep disorders, viral hepatitis, all-cause mortality, and cause-specific mortalities, especially death by intentional self-

harm. Most associations were attenuated but persisted after adjusting for psychiatric comorbidity. The absolute risk difference of a specific disease within 12 years from the first diagnosis of depression during youth ranged from -0.2% (95% CI, -1.0% to 0.6%) for arthropathies among males to 23.9% (95% CI, 22.7%-25.0%) for the broader category of injuries among females [41].

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## Conflicts of interest

The authors have declared no conflict of interest

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