

## Affective disorders in childhood and adolescence

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Affective disorders in childhood have been more intensively studied in the last three decades. They can be recognized among the children of all ages, but are more frequent among the older children. The main characteristics of mood disorders are similar among children, adolescents and adults, although development factors affect their clinical features. Development factors affect the manifestation of all symptoms. Two main criteria for these disorders in childhood are mood disorders, such as reduced or elevated mood and irritability. These symptoms may result in social or academic damage. Depression among children is a wide-spread, family and recurrent condition, which continues episodically in adulthood. Depression is frequently associated with other psychiatric disorders, increasing the risk of suicidal behaviour, misuse of psychoactive substances and behavioural disorders. Depression in childhood brings about worse psychosocial, academic and family functioning. Family, social and environmental factors have a significant role in affective disorders of children and young people.

**Key words:** Mood disorders, Children, Adolescence, Depression, Bipolar disorder.

### Introduction

Mood disorders among children and adolescents have been more intensively studied in the last three decades, and more comprehensive clinical study is a result of the increase of suicidal behaviour and realized suicides among young people (1). These disorders are characterized by mood swings in the form of a reduced or excessively good mood, which is followed by difficulties in the family, academic and social functioning. The majority of these disorders show the tendency towards recurrence, and the beginning of individual episodes is often connected with certain stressful events. Depressive and bipolar affective disorders are most frequent in the development period. The existing classification systems do not classify mood disorders in the development age into separate catego-

ries, but they use the same diagnostic criteria both for children and adults. Two basic criteria for affective disorders in childhood and adolescence are mood disorder and irritability. The symptomatology with younger children is less clearly differentiated and is more difficult to recognize, while it becomes clearer and more specific with adolescents and even takes a clinical picture of a disorder in adults (2). These disorders are often associated with other psychiatric disorders, increasing the risk of suicidal behaviour, misuse of psychoactive substances and behavioural disorder (3).

### **Depressive disorders**

Although there were individual descriptions of depression in childhood in literature, most experts have doubted the possibility of the existence of depression in children considering that children do not have a psychic apparatus mature enough for them to be depressive, or that it is a matter of overemphasis in the normal development processes in childhood (4). However, sensitizing psychiatrists to psychic difficulties among children and adolescents, taking development components into account, has increased awareness of the importance and spread of this group of disorders. Depression at this age represents to a certain degree a contradiction, since that age in life is "predetermined for happiness and life joy". Depression in the development period has been more intensively studied in the last twenty or so years. Depressive symptomatology is not a normal aspect of child and adolescent development, but rather a psychological disorder, which, unless recognized, may persist for months and years and may seriously endanger their functioning.

### **Epidemiology and causes**

Epidemiological studies on depression in children and adolescents are still difficult to interpret, they differ from one author to

another and depending on the criterion for assessment, the manner of forming samples, the examiner's objectivity, and social, cultural and other factors. However, most authors present the data that 2.5% of children and 8.3% of adolescents suffer from depressive disorders (5). The presence of a depressive mood is much more widespread and about one third of adolescents report depressive moods, the girls more often. The disorder is equally represented among girls and boys, while a significantly higher number of girls suffer from depressive disorders in adolescence (6). It is considered that hormonal and environmental factors contribute to the increased frequency of depression among female adolescents (7). The rate of depression increases significantly as they move into adolescence (8).

It is considered that genetic factors play an important role in creating a predisposition for development of depression in the development period, while numerous external factors contribute to the expression of depression, as the initiators of the first episode of depression. Depressive disorders in children are also often associated with a major psychic and physical burden with no sufficient rest, great expectations, a weak emotional relationship with their mother and other important persons, psychic traumas because of a real or threatened loss of a beloved person or object (9).

The research into neuroendocrine changes has shown that depressive pre-puberty children had a lower secretion of cortisol during the first 4 hours of sleep (10), and the study of adolescents with depression showed a reduction of perfusion in the left-side frontal and temporal cortical region (11). Molecular genetic studies discovered some abnormalities in the neurotransmitter system: the MAOA gene responsible for functioning of monoamine oxidase and serotonin transporter gene (5-HTT), which is involved in the process of serotonin production and represents a marker for vulnerability to depression in children (12).

The risk factors for depressive expressions among children are: family history of depression, family conflicts, exposure to violence, development incapacities, chronic diseases, comorbid conditions, stress, traumatic events, break-up of a romantic relationship, etc. Numerous studies on stressors associated with war-time events and loss of parents show that in children they are especially manifested in the affective-emotional area (13). Research among the war-traumatized children showed that children experienced many psychological consequences and a high prevalence of PTSD, often in comorbidity with depression, in children who had lost one or both parents (14). A higher frequency of PTSD was also noticed in adolescent refugees even a few years after the end of the war (15). The latest studies show that the death of parents represents more than a four-fold risk for developing depression in children and adolescents (16).

### **Clinical manifestations of depressive disorders**

The diagnostic criteria and main characteristics of depression are the same as in adults, but the manner in which children manifest them is different, which makes them more difficult to recognize. The manner in which children manifest depression is different at individual stages of development, and small children find it difficult to recognize and describe internal emotions or moods; or they do not have a vocabulary to speak about such feelings and they manifest them through their behaviour. The expression of depression differs according to the cognitive level. Pre-school children are not cognitively equipped to present subjective expressions of depression; but, they may complain about somatic symptoms. Children often express sorrow through irritability and frustrations, fits of anger and behavioural problems. That is why it is necessary to decide on depres-

sive symptoms based on behaviour, including apathy, withdrawal, postponement or regression of development benchmarks or insufficient growth that has no organic cause. These children may be less mobile, enthusiastic or spontaneous; they may seem serious, absent or sick; they can spontaneously show conditions of crying or irritability.

School children are cognitively capable of internalizing environmental stressors (e.g. family conflict, criticism, failure at school...) and they express low self-respect and guilt. However, they express much of this internal unrest through somatic complaints, especially headaches and stomach problems; anxiety and irritability (fits of ill humour, rage and other problems in behaviour). Depression may primarily exist as a behavioural disorder, misuse of alcohol and substances or as a state of revolt and turmoil in the family. Children's complaints of being bored often hide depressive feelings.

Depression in children and adolescents may be manifested as:

- Frequent unclear and undetermined corporal complaints (headache, stomach pains, tiredness, pains in muscles...);
- Being frequently absent from school and poor achievement in school;
- Bursts of screaming, protests, complaints, inexplicable irritability or crying;
- Being bored;
- Decreased interest in playing with children of the same age;
- Social isolation, poor communication; difficulties in establishing relations;
- Fear of death;
- Distinct over-sensitivity to rejection or failures;
- Abuse of alcohol and other problems.

Child and adolescent psychopathology is characterized by the presence of many disorders, and this is especially the case with depression. With regard to depression we may say that comorbidity is rather a rule than an expectation. It is considered that the major-

ity of young people with major depression have at least one comorbid disorder, and also 30% to 50% of them have two or more psychiatric disorders (17).

The two most frequent diagnosed disorders are dysthymic and anxiety disorder, and then disruptive disorders in behaviour and abuse of substances (18). Comorbid disorders are similar in girls and boys; although boys have more frequent disruptive disorders and depression and the girls have disorders in diet and depression.

#### *Suicidal behaviour*

One of the significant risks following depressive disorders in children and adolescents is the risk of suicidal behaviour, which becomes an important mental-hygiene problem in many countries (19). There is a constant tendency of growth of both attempts and committed suicides. The risk of suicidal behaviour is increased among the depressive adolescents with the comorbidity of behavioural disorder and abuse of substances. Suicidal activity is generally associated with a significant acute crisis in the life of a teenager. Poor grades in school, a negative warning or reprimand by important persons, especially by parents and teachers, the break-up of a romantic relationship or loss may precipitate a suicidal action (20). Suicidal ideas and actions are more frequent among the children who have already gone through an important stress in their lives (divorce of parents, parental or family disagreements, corporal or sexual abuse, misuse of psychoactive substances, etc.). The highest number of attempted suicides belongs to the group of mixed disorders (affective disorders and behavioural disorders).

#### *Assessment, diagnosis and consequences of depressive disorders*

The assessment of depression in children may be difficult depending on their devel-

opment phase. These children often resist or withdraw, and many of them refuse to talk. Some of them deny sorrow, but often have fits of irritability, sleep problems, frequently complain of being bored, and have persistent problems in their behaviour at home and at school. Parents and teachers notice that the child withdraws, spends a lot of time alone and does not make friends with children of the same age as before. The diagnosis of a depressive disorder is established through a medical and psychiatric evaluation. Numerous medical conditions may hide depression, like infections (hepatitis, influenza, infectious mononucleosis, virus infections, immunodeficiency disorder), Cushing's disease, hypothyroidism, hyperparathyroidism, porphyria, etc. Some conditions incline to mood disorders: diabetes mellitus, epilepsy, anxiety disorders, eating disorders, abuse of alcohol and other substances, electrolyte imbalance, use of medicaments (barbiturates, benzodiazepines, corticosteroids, anticonvulsants...), behavioural disorder, physical abuse, etc.

After recovering from an episode of serious depression, many children show sequels in the form of poor self-respect, damaged interpersonal relations, subclinical depressive symptoms and a decrease in global functioning. The most serious complication of depression is suicide.

#### *Treatment of depressive conditions*

Depressive disorders in the development age are inclined to be recurrent, therefore the approach and treatment have to be extended. It is important to help the child and the parents in recognizing the signs of disease recurrence at an early stage and encourage them to ask for help as soon as the first symptoms appear. Reduction of depression is the main focus of treatment, in which the treatment of comorbid difficulties also has to be taken into account. Some of these difficulties, like the problem with regard to

relationships with children of the same age, can result in prolonged depression, and that is why depression in the development period requires a series of therapeutic interventions. These children feel lonely and the fear of loneliness is often more painful than depression itself, and the feeling of loneliness and fear of abandonment are pervasive for the child. The optimal sequence of treatment means establishing a warm and caring relationship that both the child and the family can accept, with the initiation of emotional growth and independence and the gradual decrease of dependence on the therapist, along with building better relationships with the parents and peers.

In treating depressive conditions in the development age we use pharmacotherapy along with various psychosocial and psychotherapeutic interventions. Psychotherapy can be useful as an initial therapy for children and adolescents with mild to moderate depression or as a supplement to medication therapy in more serious and grave forms of depression. The appropriate psychotherapy approach will be applied depending on the emotional and cognitive development level. Play therapy and parental training are applied with depressive pre-school children, while psychodynamic or cognitive-behavioural therapy will be applied with older children and adolescents (21, 22). The basis of this treatment is to help depressive children in changing their negative cognition about themselves and the surrounding world.

Pharmacological treatment most often represents an integral part of the general therapeutic program. Medicaments cannot either build or change patterns of behaviour, moral standards, positions about oneself and others; but they can alleviate some symptoms and help in establishing relationships between the child and his/her family group and group of peers. When applying psycho-pharmaceuticals it is important to pay attention to the specifics of the child's

or adolescent's age, i.e. the physiological characteristics of the child's organism, liver metabolism, kidney filtration, body weight and other pharmacodynamic factors. A special problem may be presented by the parents who often, on the basis of their free will, terminate the therapy, reduce the proposed dose, etc. Tricyclic antidepressants were the first accessible pharmacotherapy for depressive children (23). Because of the anticholinergic and potential cardiotoxic effect of these medications, especially in the case of overdosing, tricyclic antidepressants become the second line in the therapy, yielding the first place to serotonin reuptake inhibitors. The recent studies on the successfulness of serotonin reuptake inhibitors indicate positive results in treating depression in the development age (24, 25). These antidepressants have a secure profile and carry less risk of cardiotoxicity and lethal overdose, which is especially important in treating impulsive adolescents. A few randomized, placebo-controlled studies, which encompassed 1619 children and adolescents, have indicated that fluoxetine, paroxetine, sertraline and citalopram showed safety and efficiency in treating depression in children and adolescents (26). Due to the fewer undesired side effects and safer profile, these antidepressants represent the most often used antidepressants in treating children and adolescents. Depression in the development age is recurrent and has a high tendency of relapse, therefore antidepressants are generally and continuously administered for a period of 6 to 12 months after the remission of the symptoms of an acute episode of depression. After this period the dose is gradually reduced over the course of six weeks, along with continuous observance of recurrent symptoms.

### **Bipolar affective disorder**

Bipolar disorders in children and adolescents have been unrecognized and neglected

for a long time. Only in the 80-ies of the last century did the awareness rise of the need to define and diagnose this group of disorders in children and adolescents. This disorder is characterized by extreme changes in mood, energy level and behaviour, and the symptoms may occur in early childhood, but the occurrence in adolescence is more typical. In the last twenty or so years, bipolar disorders are diagnosed more often, including in pre-school children (27). Children with bipolar disorder usually have quick swings from an extremely elevated mood (mania) to a reduced mood (depression). These quick swings of mood may cause irritability with periods of good condition between the episodes, or the young people may feel both extremes at the same time.

#### *Epidemiology and causes of bipolar disorder*

Studies of the school population in the community have established life prevalence in 1%, and mania alone in 0.15% among older adolescents. The majority of discovered cases had hypothyroid or cyclothymic disorder. Around 5.7% of them had symptoms below the threshold (28). Although this disorder affects both sexes equally, an earlier beginning is more frequent in boys, especially under 13 years of age. The new studies indicate that mood swings (most often depression) start in childhood, and some experts suggest that there is a prevalence of 1% in young people (29). The aetiology of bipolar disorder is still unknown, and it is believed that it is a result of the interaction of a series of biological, psychological and social factors. It is considered that the pathogenesis of bipolar disorder has a great deal in common with depression, with regard to the abnormality of neurotransmitter and neuroendocrine functions. Nevertheless, it seems that the genetic component of bipolar disorder is stronger than in depression, with a higher number of close relatives affected. It

is known that psychosocial stress often precedes the first manic episode, but its influence on the occurrence of subsequent episodes has not been observed.

#### *Clinical manifestation of bipolar disorder*

The basic characteristic of bipolar disorder is the clinical course, characterized by one or more manic or mixed episodes. Mania is defined by the period during which there is an abnormal and permanently elevated or irritable mood and it may last for one week or shorter, if it is of such an intensity that it requires hospitalization and is associated with at least three of the following symptoms:

- Serious mood swings from unusual joy or senselessness to irritability, anger or aggressiveness;
- Unrealistically high self-respect, feeling of invincibility;
- Major increase in energy levels, sleeping little without feeling tired;
- Excessive involvement in multiple projects and activities, moving easily from one activity to the other and easily getting distracted;
- Increased talking, speaking too much, quickly, frequently changing topics, cannot be interrupted;
- Risky behaviour, such as abuse of drugs, alcohol, attempts at amazing escapades, starting sexual activities;
- Exaggerated involvement in pleasant activities potentially resulting in unpleasant, painful consequences.

A depressive episode of bipolar disorder in the development period is characterized by:

- Frequent sorrow, sadness or crying;
- Withdrawal from friends and activities;
- Reduction of energy levels, lack of enthusiasm or motivation;
- Feeling of worthlessness or excessive guilt;
- Extreme oversensitivity to rejection or failure;

- Major changes in habits, like excessive sleeping or eating too much;
- Frequent corporal complaints, like headaches and stomach pains;
- Repeated thoughts about death, suicide or self-destructive behaviour.

Many teenagers with bipolar disorder misuse alcohol and drugs. If addiction develops, it is necessary to treat both mental disorders at the same time. One of the main sources of diagnostic confusion for the children with bipolar disorder is comorbidity with other psychiatric disorders, especially with ADHD, behavioural and anxiety disorders. One of the reasons for the huge agreement of bipolar disorder with ADHD is that they share many diagnostic criteria, including absent-mindedness, hyperactivity and verbosity (talking too much).

Some corporal conditions and use of psychoactive substances may produce symptoms similar to mania, like neurological disorders (brain tumours, CNS infections, including HIV, multiple sclerosis, temporal epilepsy, Klein-Levin syndrome), systemic conditions like hyperthyroidism, porphyria, uraemia, Wilson disease; and use of antidepressants, stimuli, steroids, as well as use of cocaine, amphetamines, phencyclidine and inhalants.

The presence of these disorders complicates diagnosis and recognition of this disease in children. It is considered that the early occurrence of this disorder often has a chronic course, including a high incidence of suicide and frequent mood swings. Many children, and especially adolescents, consider mood swings as a normal part of growing up, but when these feelings persist and disturb the capability of the child to function on a daily basis, bipolar disorder may be the cause.

#### *Treatment of bipolar disorder with children*

Treatment of bipolar disorder in the development period includes a biopsychosocial, multifactoral and multidisciplinary ap-

proach. An overall, comprehensive diagnostic assessment is necessary, with a special assessment of suicidal risk and the presence of comorbid diseases, and identification of other problems, like dysfunctional family and difficulties at school. The fundamental psychopharmacological therapy is the use of mood stabilizers, but it is possible to add antipsychotics, highly potent benzodiazepines and other medication depending on the clinical picture and speed of exchange of episodes (30). Psychotherapeutic interventions are applied in the course of treatment, and specifically cognitive-behavioural psychotherapy and interpersonal psychotherapy. The psycho-educational work with family members is of special importance with the goal of improving cooperation during treatment, a better understanding of disease and preventing relapse.

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