## Changes Needed in the Classification of Anxiety Disorders in Childhood: Options for ICD-11

Miodrag Stanković<sup>1,2</sup>, Grozdanko Grbeša<sup>1,2</sup>, Jelena Kostić<sup>1</sup>, Sandra Stanković<sup>3</sup>, Jelena Stevanović<sup>4</sup>

<sup>1</sup>Clinic for Mental Health Protection, Clinical Center, Niš, Serbia;

<sup>2</sup>University of Niš, Faculty of Medicine, Niš, Serbia:

<sup>3</sup>Clinic for Child Internal Diseases, Clinical Center, Niš, Serbia;

<sup>4</sup>General Hospital, Leskovac, Serbia

#### **SUMMARY**

Considering the intensive preparation of the 11<sup>th</sup> revision of the International Classification of Diseases (ICD-11), we discussed the justification of the existing classification of emotional disorders with onset specific to childhood. This paper presents the citations from the ICD-10 (F93 block) and the authors' comments as a critical review of the justification of further existence of emotional disorders with onset specific to childhood as a separate block in ICD-11 classification. We concluded that the block F93 is insufficiently defined and should be completely changed or removed from the ICD-11 classification. Additionally, the specificities of the clinical picture of anxiety disorders in children should be adequately described within the future category of anxiety and phobic disorders by giving an explicit set of instructions for identifying clinical manifestations which vary by age.

Keywords: emotional disorders with onset specific to childhood; anxiety disorders; ICD-10; ICD-11

### INTRODUCTION

Recent developments in both practice and research demonstrate the importance of anxiety disorders in childhood psychopathology. Considering the intensive development of the 11th revision of the International Classification of Diseases (ICD-11), questions have arisen as to how objective our current diagnostic system is for children. We will discuss the need for the revision of the existing classification of emotional disorders with onset specific to childhood (block F93) [1], with the goal to improve recognition of this important population. In ICD-10 classification block F93 is separated from other psychiatric disorders that occur regardless of age and whose diagnostic criteria are also valid for children (F00-F79). Relation and difference to the block F40-F48 ("Neurotic, stress-related and somatoform disorders") was accentuated by this segregation. There are four justifications in ICD-10 to separate emotional disorders specific to childhood. The following section presents citations from the ICD-10 (block F93), and the authors' comments as a critical review of further existence of emotional disorders with onset specific to childhood as a separate block in ICD-11 classification.

CONSIDERATION OF FOUR MAIN
JUSTIFICATIONS FOR DIFFERENTIATION
OF EMOTIONAL DISORDERS IN
CHILDHOOD FROM ADULT EMOTIONAL
DISORDERS

1. Research findings have been consistent in showing that the majority of children with

emotional disorders go on to become "normal" adults. On the contrary, many adult anxiety disorders appear to have an onset in adult life without significant psychopathological precursors in childhood. Hence, there is a considerable discontinuity between emotional disorders occurring in these two age periods.

Comment: The first criterion causes confusion in understanding anxiety disorders because it indicates the difference in the origin and evolution of fears in children and adults. Empirical data show that most of the fears in children, adolescents and adults are learned ("fear conditioning"). Those principles of learning are universal and well-studied [2, 3, 4]. Another group of fears, for which there is no prior experience ("phylogenetic fears"), and which amplify with repeated exposure, also represent a universal functional aspect of the neural circuits of emotional response of all mammals. Therefore, theoretically established differences in the occurrence of anxiety disorders in children and adults are not logical. The reason why all children who express anxiety disorder do not continue to "suffer" in adulthood can be found in the fact that there is a possibility of variations in manifestation in relation to age, different degrees of manifestation of symptoms, cognitive adaptation to the symptoms, changes in the provocative circumstances in family [5] and, finally, the manner in which the disorder is diagnosed by category or dimensional paradigm.

The second part of the claim that many adult anxiety disorders begin in adulthood rather than in childhood is incorrect. On the contrary, the majority of adults with anxiety and affective disorders have a history of anxi-

Correspondence to:

Miodrag STANKOVIĆ Zelengorska 19/11, 18000 Niš Serbia

adolescencija@gmail.com

ety disorders exactly in childhood [6]. Now we know that anxiety disorders are among the most stable forms of psychopathology including children [7]. The claim that many anxiety disorders developed during childhood tend to persist in adulthood if not treated is accepted in DSM-V classification [8]. There is even an established longitudinal connectivity (and not a discontinuity) between specific disorders in childhood and those in adulthood, social anxiety and social phobias, separation anxiety and panic disorder, generalized anxiety with various anxiety disorders and depression [9, 10]. Therefore, the second and third statement are in opposition with the data of continuity of childhood anxiety disorders and of the fact that anxiety disorders in childhood predict anxiety and depression in adulthood.

### 2. Many emotional disorders in childhood seem to constitute exaggerations of normal developmental trends rather than phenomena that are abnormal themselves.

**Comment:** This justification is noted as key for determination of differences between disorders of blocks F93 and F40-F49. However, the validity of this difference is not reliable because it introduces relativism and uncertainty of the disorder existence, but also the negation of the usefulness of the overall classification of mental disorders which should clearly separate the pathological from nonpathological. In these criteria it is not clear whether the fears are really fears and whether they are pathological or not. If fear condition is not an abnormality, why do we qualify it as a disorder? In other words, if an emotional state is qualified as abnormal, then it cannot be developmental, but rather pathological. If a child learns a new truth about itself and about the world around it exhibiting abnormal emotional state, then that can be a state of adaptation, but it is also classified in a different block. If we want to further relativize this criterion, we can say that any change in emotional response and behavior, whether in childhood or adulthood, may be "developmental" in terms of some adaptation or learning, and therefore does not represent a pathological condition. Thus, there is a conclusion that this criterion creates confusion in defined boundaries between normal and pathological anxiety in children. It is also ambiguous in understanding anxiety disorders in general.

# 3. The former statement is based on theoretical assumptions that mental mechanisms involved in emotional disorders of childhood may not be the same as for adult neuroses.

Comment: The third justification, which is based on theoretical concepts (rather than empirical evidence) is impossible to prove the way it is presented. It is known that the functional neuronal circuits are the same in all mammalian brains, with the difference related to the neocortex and the development of cognitive apparatus in humans [11]. Researches conducted on animal models have shown that: a) differences in the functioning of neural circuits are individual; b) there are no differences in the functioning of neural circuits between young and adult animals; c) ex-

istence of emotional disorders in pediatric population is the result of abnormalities, which both adults and children show in cognitive tests and neuromorphometry [12, 13, 14]. It has even been shown that mature neural circuits of adults with anxiety disorders reflect the long-term impact of environment at an early age [15]. Also, there is little doubt that anxiety disorders are heritable and mediated by genetic factors [7]. Finally, pharmacological studies have shown that the effects of the examined benzodiazepines and antidepressants in the pediatric population are similar to those in adults [6, 16]. If we know, in general, that the nervous system of children and adults is the same, but has not reached the full maturation in children, it is logical that this fact makes the difference, rather than existing brain structures and mental mechanisms including cognitive experience, which is wider and more complex in most adults.

### 4. The emotional disorders of childhood are less clearly demarcated into supposedly specific entities such as phobic or obsessional disorders.

Comment: Conspicuousness of this justification is that, if correct, it contradicts the statement number 2, because the disorder cannot be existent and non-existent at the same time and cannot be less differentiated and appropriate to developmental period. Also, if we do not recognize emotional disorders in childhood, we cannot sufficiently precisely monitor and discuss the relationship with anxiety disorders in adulthood, which again calls into question the statement number 1.

Disorder differentiation problem in children can be seen through the lesser inclusion of learning. This underdevelopment of cognitive apparatus in children shifts the balance toward the greater expression of "predisposed fears" (unlearned fears) and social fears, but less toward the learned, especially cognitively conditioned fears [17]. It is evident that preschool children rarely manifest panic disorder, although they may have panic attacks as a part of many anxiety states, due to lack of cognitive potential for the wrong interpretation of the somatic experience in the catastrophic manner [18]. On the other hand, there are well-described clinical pictures of the separation disorder, social anxiety disorder and generalized anxiety disorder, simple phobias and obsessive disorder in preadolescent period. The longitudinal connection of specific disorders of childhood with those in adulthood has already been mentioned. Therefore, the claim that childhood-related emotional disorders are less clearly separated into specific entities cannot exclude their existence, so their extraction into specific block is illogical. It is probably more logical to define them as part of an existing block of anxiety disorders, because no other disorder is specific to early development except separation anxiety disorder.

### **CONCLUSION**

There is an obvious intention that the existence of block F93 justifies the optimism that emotional disorders in childhood are not the same as anxiety disorders in adult-

hood (The validity of this distinction between the emotional disorders with an onset specific to childhood (F93.–) and the neurotic disorders (F40–F49) is uncertain, but there is some empirical evidence to suggest that the developmentally appropriate emotional disorders of childhood have a better prognosis). However, the desires and theoretical assumptions are not supported by valid evidence. On the contrary, some evidence is exactly contrary to the assertions.

We know that ICD-11 will use a different coding structure that is not based on a decimal numbering system, such that there can be a larger number of blocks or groupings within a chapter [19]. Our conclusion is that the ICD-11 Working Group on the Classification of Mood and Anxiety Disorders should consider that the block F93, "Emotional disorders with onset specific to childhood",

is not well defined and therefore should be completely changed or removed. Although the possibility of certain emotional disorders with onset specific to childhood is undisputed (such as separation anxiety), it is more logical that the future ICD-11 classification should adequately describe the specificities of the clinical picture of anxiety disorders in children. This description should be included in the framework of anxiety and phobic disorders by giving an explicit set of instructions for identification of clinical manifestations that vary with age [20-23]. Otherwise, such an unjustified separation, as well as eventual classification at neurodevelopmental disorders block, will be an artificially created category in the service of theory, arising the questions how well we meet the clinical needs of impaired children.

### **REFERENCES**

- World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research. Geneva: World Health Organization; 1994.
- Berliner L, Saunders BE. Treating fear and anxiety in sexually abused children: results of a controlled 2-year follow-up study. Child Maltreat. 1996; 1(4):294-309.
- Sierra-Mercado D, Padilla-Coreano N, Quirk GJ. Dissociable roles
  of prelimbic and infralimbic cortices, ventral hippocampus,
  and basolateral amygdala in the expression and extinction of
  conditioned fear. Neuropsychopharmacology. 2011; 36:529-38.
- Quirk GJ, Gehlert DR. Inhibition of the amygdala: key to pathological states? Ann N Y Acad Sci. 2003; 985:263-72.
- 5. Angst J, Vollrath M. The natural history of anxiety disorders. Acta Psychiatr Scand. 1991; 84:446-52.
- Pine DS, Klein RG. Anxiety disorders. In: Rutter M, Bishop D, Pine D, Scott S, Stevenson J, Taylor E, Thapar A, editors. Rutter's Child and Adolescent Psychiatry. 5th ed. London: Blackwell; 2008. p.628-648.
- Rapee RM. Anxiety disorders in children and adolescents: nature, development, treatment and prevention. In: Rey JM, editor. IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International Association for Child and Adolescent Psychiatry and Allied Professions; 2012. p.1-19.
- American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Association: 2013.
- Pine DS, Cohen P, Johnson JG, Brook JS. Adolescent life events as predictors of adult depression. J Affect Disord. 2002; 68(1):49-57.
- Beesdo K, Knappe S, Pine D. Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. Psychiatr Clin North Am. 2009; 32(3):483-524.
- Davis M, Whalen PJ. The amygdala: vigilance and emotion. Mol Psychiatry. 2001; 6(1):13-34.
- 12. Gross C, Hen R. The developmental origins of anxiety. Nature Reviews. Neuroscience. 2004; 5:545-52.
- 13. Monk CS, Nelson EE, McClure EB, Mogg K, Bradley BP, Leibenluft E, et al. Ventrolateral prefrontal cortex activation and attentional bias

- in response to angry faces in adolescents with generalized anxiety disorder. Am J Psychiatry. 2006; 163:1091-7.
- Millham MP, Nugent AC, Drevets WC, Leibenluft E, Ernst M, Charney DS, et al. Selective reduction inamygdala volume in pediatric generalized anxiety disorder: a voxel-based morphometry investigation. Biol Psychiatry. 2005; 57:961-6.
- Weaver IC, Meaney MJ, Szyf M. Maternal care effects on the hippocampal transcriptome and anxiety-mediated behaviors in the offspring that are reversible in adulthood. Proc Natl Acad Sci U S A. 2006; 103:3480-5.
- Kolar D, Bojanin S. Social phobia in developmental period: from theory to therapy. Srp Arh Celok Lek. 2005; 133(1-2):86-90.
- Pine DS, Helfinstein SM, Bar-Haim Y, Nelson E, Fox NA. Challenges in developing novel treatments for childhood disorders: lessons from research on anxiety. Neuropsychopharmacology. 2009; 34:213-28.
- Costello EJ, Egger HL, Angold A. Developmental epidemiology of anxiety disorders. In: Ollendick MJ, editor. Phobicand Anxiety Disorders in Children and Adolescents. New York, NY: Oxford University Press; 2004. p.61-91.
- Maj M, Reed GM. The ICD-11 classification of mood and anxiety disorders: background and options. World Psychiatry. 2012; 11(Suppl 1):3-5.
- Pine DS, Costello J, Dahl R, James R, Leckman J, Leibenluft E, et al. Increasing the developmental focus in DSM-V: broad issues and specific potential applications in anxiety. In: Rogier DA, Narrow WE, Kuhl EA, Kumpfer DJ, editors. The Conceptual Evolution of DSM-5. Washington, DC: American Psychiatric Publishing; 2011. p.305-321.
- Rutter M. Research review: Child psychiatric diagnosis and classification: concepts, findings, chalenges and potential. J Child Psychol Psychiatry. 2011; 52(6):647-60.
- Rutter M, Üher R. Classification issues and challenges in child and adolescent psychopathology. Int Rev Psychiatry. 2012; 24:514-29.
- 23. Rutter M. Annual research review: Resilience clinical implications. J Child Psychol Psychiatry. 2013; 54(4):474-87.

### Промене потребне у класификацији анксиозних поремећаја у детињству – опција за МКБ-11

Миодраг Станкови $\hbar^{1,2}$ , Грозданко Грбеша $^{1,2}$ , Јелена Кости $\hbar$ , Сандра Станкови $\hbar^3$ , Јелена Стеванови $\hbar^4$ 

<sup>1</sup>Клиника за заштиту менталног здравља, Клинички центар, Ниш, Србија;

### КРАТАК САДРЖАЈ

Имајући у виду интензивирану припрему Једанаесте ревизије Међународне класификације болести (МКБ-11), размотрена је оправданост ревизије постојеће поделе емоционалних поремећаја код деце. У раду су приказани цитати извода из Десете ревизије МКБ (блок Ф93) и коментари аутора у којима је дат критички осврт на даљу оправданост постојања поменутог блока у МКБ-11 класификацији. Постоји довољно аргумената да је блок Ф93 недовољно добро

дефинисан и да га треба потпуно уклонити. Сматрамо да у будућој класификацији треба на одговарајући начин описати специфичности клиничких слика анксиозних поремећаја код деце у оквиру већ постојећих анксиозних и фобичних поремећаја, уз давање експлицитног сета инструкција за препознавање клиничких манифестације које варирају с узрастом.

**Кључне речи:** емоционални поремећаји с почетком у дечјем узрасту; анксиозни поремећаји; МКБ-10; МКБ-11

Примъен • Received: 18/08/2014 Прихваћен • Accepted: 09/02/2015

<sup>&</sup>lt;sup>2</sup>Универзитет у Нишу, Медицински факултет, Ниш, Србија;

³Клиника за дечје интерне болести, Клинички центар, Ниш, Србија;

<sup>&</sup>lt;sup>4</sup>Општа болница, Лесковац, Србија