Культурно-историческая психология
2025. *21*(1), 88—92.
https://doi.org/10.17759/10.17759/chp.2025210109
ISSN: 1816-5435 (печатный)
ISSN: 2224-8935 (online)

Cultural-Historical Psychology
2025. *21*(1), 88—92.
https://doi.org/10.17759/10.17759/chp.2025210109
ISSN: 1816-5435 (print)
ISSN: 2224-8935 (online)

DISCUSSION AND DISCURSIS
ДИСКУССИИ И ДИСКУРСЫ

Cultural-Historical Neuropsychology and ADHD: Commentary on the Article "ADHD Diagnosis from the Perspective of Cultural-Historical Neuropsychology" by Athanasios Koutsoklenis, Yulia Solovieva, and Luis Quintanar Rojas

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Abstract

This article presents a commentary on the paper "ADHD Diagnosis from the Perspective of Cultural-Historical Neuropsychology". The authors of this paper, Athanasios Koutsoklenis, Yulia Solovieva, and Luis Quintanar Rojas, strongly advocate for a paradigm shift from the traditional diagnostic approach to cultural-historical neuropsychology (CHNP). According to the authors, the CHNP approach allows us to reject ADHD diagnosis when assessing the corresponding syndrome. The authors suggest that such a departure from an intermediate level of abstraction (in the form of a diagnosis) in favor of the results of neuropsychological evaluation of a particular child will enable a direct transition to personalized recommendations for corrective and developmental support for that child. Despite the commonality of our initial theoretical positions, namely the principles of cultural-historical psychology and neuropsychology developed by Lev Vygotsky and Alexander Luria, I do not agree with the solution proposed by the authors regarding the issue of diagnosing ADHD.

The proposal to renounce the diagnosis of ADHD does not address the issues of providing support to children and their stigmatization. These problems are either resolved or left unresolved depending on the resources available to help a child in a given social context. The solution lies in enhancing the efficiency of the support provided to children, including the neuropsychological support. The rejection of the diagnosis and the attempt to justify this through CHNP involves overlooking several of its key principles, which could ultimately lead to discrediting of CHNP. Furthermore, while rejecting the ADHD diagnosis we simultaneously refuse the necessity to further investigate the mechanisms of the syndrome via current and future scientific tools.

Keywords: cultural-historical neuropsychology, attention-deficit/hyperactivity disorder (ADHD), diagnosis of ADHD, social context of development

Funding. The study was conducted under the state assignment of Lomonosov Moscow State University № AAAA-A20-120012890168-8.

For citation: Akhutina T.V. Cultural-Historical Neuropsychology and ADHD: Commentary on the Article "ADHD Diagnosis from the Perspective of Cultural-Historical Neuropsychology" by Athanasios Koutsoklenis, Yulia Solovieva, and Luis Quintanar Rojas. *Kul'turno-istoricheskaya psikhologiya = Cultural-Historical Psychology*, 2025. Vol. 21, no. 1, pp. 88—92. DOI: https://doi.org/10.17759/10.17759/chp.2025210109

О культурно-исторической нейропсихологии и диагнозе СДВГ: комментарий к статье А. Куцокленисa, Ю. Соловьевой, Л. Кинтанара Рохаса «Диагностика СДВГ с позиций культурно-исторической нейропсихологии»

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Резюме

В данной статье предлагается комментарий к статье «Диагностика СДВГ с позиций культурно-исторической нейропсихологии». Авторы комментируемой статьи А. Куцокленис, Ю. Соловьева и Л. Кинтанар Рохас решительно выступают за смену парадигмы от традиционного диагностического подхода к культурно-исторической нейропсихологии (КИНП). По мнению авторов, подход с позиций КИНП позволяет отказаться от постановки диагноза СДВГ при диагностике этого синдрома. Авторы предполагают, что такой отказ от промежуточного уровня абстракции (в форме диагноза) в пользу результатов нейропсихологической оценки конкретного ребенка позволит напрямую перейти к персонализированным рекомендациям по коррекционно-развивающей помощи данному ребенку. Несмотря на общность наших исходных теоретических позиций, т. е. принципов культурно-исторической психологии и нейропсихологии, разработанных в трудах Л.С. Выготского и А.Р. Лурии, я не согласна с предлагаемым авторами статьи решением вопроса о диагнозе СДВГ.

Предложение отказаться от диагноза СДВГ не решает проблему помощи детям, в частности проблему их стигматизации. Проблема решается или не решается в зависимости от того, какие средства помощи реально доступны в данной социальной ситуации развития ребенка. Решение проблемы лежит в увеличении эффективности оказываемой детям помощи, в том числе нейропсихологической. Отказ от диагноза и попытка его обоснования культурно-исторической нейропсихологией связан с игнорированием ряда ее положений и может повести в конечном счете к дискредитации КИНП. Кроме того, отказываясь от диагноза СДВГ, мы одновременно отказываемся от необходимости все глубже изучать механизмы синдрома, используя современные и будущие научные средства.

Ключевые слова: культурно-историческая нейропсихология, синдром дефицита внимания и гиперактивности (СДВГ), диагноз СДВГ, социальная ситуация развития

Финансирование. Исследование выполнено в рамках государственного задания МГУ имени М.В. Ломоносова № АААА-А20-120012890168-8.

Для цитирования: *Ахутина Т.В.* О культурно-исторической нейропсихологии и диагнозе СДВГ: комментарий к статье А. Куцокленисa, Ю. Соловьевой, Л. Кинтанара Рохаса «Диагностика СДВГ с позиций культурно-исторической нейропсихологии» // Культурно-историческая психология. 2025. Том 21. № 1. С. 88—92. DOI: https://doi.org/10.17759/10.17759/chp.2025210109

In the article by my colleagues and friends Athanasios Koutsoklenis (from Greece), Yulia Solovieva and Luis Quintanar Rojas (from Mexico), the debates on the status and diagnosis of ADHD are examined from the perspective of cultural-historical neuropsychology (CHNP), and a viewpoint on the foundations of CHNP and its prospects is proposed. Both issues — the diagnosis of ADHD and the prospects of CHNP — are undoubtedly important and require thorough consideration. Despite the commonality of our theoretical positions, namely the principles of cultural-historical psychology developed by Lev Vygotsky and Alexander Luria, our understanding of the raised questions and the proposed solution to the issue of the status of ADHD differ. Given the importance, social relevance, and complexity of both questions, I decided to present our disagreements for the consideration of the readers.

Let me begin the discussion by stating a common viewpoint. While discussing the neuropsychological assessment, the authors rightly insist on the necessity of syndrome analysis focused on identifying the underlying causes of symptoms. They emphasize that a syndrome is not merely a collection of observable symptoms that can be “simply summed up and labeled with an arbitrary diagnostic term”. They follow Lev Vygotsky who opposed the phenomenological approach limited to the

description and systematization of symptom complexes, advocating for a shift to a "causal-dynamic point of view in the methodology of studying and diagnosing development" (Vygotsky, 1983, p. 272). Lev Vygotsky emphasized that to address diagnostic issues, the description of symptoms must be followed by "dynamic typological interpretation" and "qualification of symptoms", i.e., the integration of symptoms into a cohesive picture by highlighting the specific unifying factors on the basis of which a diagnosis is made. Alexander Luria discusses this in his scientific autobiography: "Only after he [the clinical psychologist] has collected a sufficient number of similar symptoms to form a single 'syndrome' does he have the right to consider his hypothesis... proven (or refuted)" (Luria, 1982, p. 123). Alexander Luria refers to this stage of research as "syndrome analysis", the identification of the "factor".

Students of Alexander Luria define syndrome and syndrome analysis as follows: "Syndrome is a law-governed constellation of symptoms, caused by a certain primary deficit (pathological factor). There are definite primary, secondary, and tertiary (compensatory) symptoms within the syndrome. Syndrome analysis (synonym: factor analysis) is an analysis of observed symptoms with the goal of finding a common base (factor), which explains their origin. It includes a stepwise procedure which includes the comparison of all observed symptoms, a qualitive estimation of symptoms, a discovery of their common base, i.e. detecting a primary deficit, its systemic consequences and compensatory reorganization" (Akhutina, Glozman, Moskovich, 2005, p. 200. See also Akhutina, Shereshevsky, 2014).

While discussing the ADHD diagnosing, it is important to note that Lev Vygotsky considered the "qualification of the defect" and "the establishment of a diagnosis" to be necessary components of the diagnostic process. He added that "scientific diagnostics can be established even when the causes of the process that is established in the diagnosis are not yet known to us", and clarified that "the essence of the matter is that in scientific diagnosis, on the basis of known symptoms, proceeding from them, we establish a certain process underlying these symptoms" (Vygotsky, 1983, p. 317). He warned that "it is a mistake to try to see a diagnosis in establishing a series of symptoms or factual data" (ibid). Thus, according to Lev Vygotsky, for a diagnosis, it is necessary not only to identify certain symptoms but also to establish the connection between them and to postulate a common primary deficit underlying them. Based on current research data on cognitive impairments in ADHD and learning difficulties, it can be suggested that the primary deficit may have either a single cause or multiple causes (Pennington, 2006). In our opinion, Bruce Pennington rightly points out that complex behavioral disorders may arise from the interaction of multiple risk and protective factors, which can be either genetic or environmental"; he clarifies that "these risk and protective factors alter the development of cognitive functions necessary for normal development, thus producing the behavioral symptoms that define these disorders" (Pennington, 2006, p. 404). These ideas of Pennington are similar to the viewpoint of Lev Vygotsky, who considered development to be a self-organizing probabilistic process and noted that "the child is constantly influenced by positive and negative sources. Thus, secondary formations can either follow the alignment line or cause additional complications..." (Vygotsky, vol. 5, p. 130).

Let me now discuss the ADHD diagnosis and the mechanisms of the syndrome. The authors of the commented article present a contradictory picture when describing the mechanisms of ADHD. They begin by stating that in the DSM which "represents the prevailing view on ADHD", the syndrome is characterized as "a complex, multifactorial neurodevelopmental disorder". However, they immediately express doubts about the validity of ADHD as a diagnosis and provide a number of reasons, starting with "the absence of cognitive, metabolic, or neurological markers and the lack of medical tests". At the end of the article, it is argued that "ADHD is considered as a unique clinical picture" (p. 6). At the same time, the article references comprise works, including those of the authors, which discuss the identification of "different brain mechanisms that might be responsible for 'symptoms' as presented in the mainstream ADHD diagnosis".

Having painted such a multifaceted picture, the authors suggest rejecting the ADHD diagnosis. In their opinion, this rejection of an intermediate level of abstraction (in the form of a diagnosis) in favor of the results of a neuropsychological assessment of a particular child will allow for a direct transition to personalized recommendations for helping that child.

What arguments are presented for rejecting the diagnosis? These include the absence of cognitive and medical markers for ADHD; the existing practice of using medication to help children with ADHD in many countries; and the stigmatization of such children.

The authors justify the rejection of the ADHD diagnosis using the approach of CHNP. However, they do not fully take into account several important aspects of this approach, particularly regarding the identification of ADHD markers. When discussing "the absence of cognitive, metabolic, or neurological markers and the lack of medical tests" for ADHD diagnosis, the authors rely on the conclusions of a rather controversial article by Stephan Schleim (Schleim S., 2022). In this article, Schleim addresses the biomarkers of mental disorders including ADHD. For him, a biomarker should demonstrate a direct link between a behavioral feature and brain substrate. This is possible for primary areas of the cerebral cortex and elementary sensations or movements, where direct links between center and periphery were revealed. However, according to contemporary psychophysiology and neuropsychology,

human behavior is underpinned by complex hierarchical multilevel functional systems, which is also relevant even for basic cognitive and emotional processes. Lev Vygotsky acknowledged this understanding while anticipating the development of neuropsychology, and therefore he insisted that attempts to directly link symptoms with the mechanisms of disorders and "to see a diagnosis in establishing a series of symptoms or factual data" are fundamentally flawed (Vygotsky, 1983, p. 317). Expanding on Vygotsky's thought, we could say that when diagnosing based on known symptoms, we must postulate a certain underlying process responsible for these symptoms and assume that further development of science will allow us to study this process more accurately. By rejecting the diagnosis, we simultaneously forgo the necessity of studying the posited process.

The authors of the article suggest that "qualitative assessment of children with diagnosis of ADHD allows to find different mechanisms, responsible for the child's difficulties" (p. 5). At the same time, they reference the collaborative study of Regina Machinskaya who is a physiologist and a specialist in EEG, and Olga Semenova, a neuropsychologist (Machinskaya, Semenova, 2004). In the works by the authors of the commented article on ADHD diagnosis, a physiologist is frequently one of the co-authors. Thus, the authors do not limit themselves to a single qualitative neuropsychological examination of children; they complement and validate it with EEG analysis. However, is this accessible to an average psychologist?

A neuropsychologist, during the examination, obtains results from tests and observations of the child's behavior; the next step should be the integration and interpretation of the collected data, that is, making a diagnosis. Suppose the neuropsychologist does not take this step and concludes that the child exhibits increased motor activity and a delay in the development of executive functions. What would be his recommendations, therapeutic-educational appointment, that is a necessary component of the diagnosis according to Lev Vygotsky (1983, vol. 5, p. 321)? The recommendations will depend on what forms of support are actually available within the child's social situation. Whether other children will tease the child with words like "fool" or "crazy", and how teachers and doctors will treat them, will again depend on the social context.

The rejection of the ADHD diagnosis cannot change the social situation. It is important to consider whether optimal means of assistance are available, how accessible and effective the neuropsychological service is, how popular it is, and what its authority is. The issues of efficacy and accessibility of neuropsychological support are critical even in countries where medical treatment for children and adolescents with ADHD is not widely popular.

An important question that remained not addressed by the authors is the comparison of the efficacy of different approaches: pharmacological, non-pharmacological (behavioral therapy, cognitive training), and combined approaches. Research on the long-term effects of various types of assistance has shown that the combined approach yields the greatest effect. According to Arnold et al. (2020), this approach was associated with higher improvement in the achievement test results and academic performance (100% and 67%, respectively) compared to pharmacological (75% and 33%) or non-pharmacological (75% and 50%) assistance alone.

Of course, the question arises regarding what non-pharmacological assistance was provided and whether these data can be attributed to neuropsychological support. The literature on ADHD, as far as we know, does not contain information on the efficacy of this support, let alone comparisons of different types of neuropsychological assistance, although there are descriptions of it (see, for example, Solovieva, Quintanar, 2022). This is not accidental. Neuropsychologists take the requirement for an individually-tailored approach to correction seriously. The Cochrane requirements for testing efficacy are difficult to reconcile with such an approach. An individualized approach to a patient requires high qualifications and significant workload from a psychologist, while template-based work is easier and more accessible for mass verification in accordance with Cochrane requirements.

Let me summarize my commentary.

The suggestion to reject the ADHD diagnosis does not solve the problem of stigmatization of children who are currently given this diagnosis. The solution lies in increasing the efficacy of the assistance provided to them, including the efficacy of neuropsychological support. It is quite possible that a combined approach should be applied. Engaging psychophysiologists and competent doctors could be a step in the right direction. Rejecting the diagnosis and replacing it with data from neuropsychological assessment, as well as the attempt to justify this through CHNP, are associated with ignoring of several of its tenets and may ultimately lead to the discrediting of CHNP. Moreover, it is important to keep in mind that by rejecting the ADHD diagnosis, we simultaneously forgo the necessity of studying the mechanisms of the syndrome more deeply, using current and future scientific tools.

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Получена 14.03.2025
Принята в печать 14.03.2025

Received 14.03.2025
Accepted 14.03.2025