

Reflection on the relationship between attention deficit disorder and low latent inhibition*Reflexión sobre la relación entre el trastorno por déficit de atención y la baja inhibición latente**Reflexão da relação entre transtorno de déficit de atenção e inibição latente baixa***Wagner Rafael da Silva^{1*}**

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¹Universidade Brasil. São Paulo, Brazil.²Centro Universitário de Rio Preto. São Paulo, Brazil.³Instituto de Hematologia. São Paulo, Brazil.⁴Universidad de Ciencias Empresariales y Sociales. Buenos Aires, Argentina.***Corresponding author:** E-mail: wagnerrafaeldasilva@hotmail.com**Abstract**

This study proposes a theoretical reflection on the relationships between Attention Deficit Hyperactivity Disorder (ADHD) and Low Latent Inhibition (LLI), analyzing their implications for clinical practice in mental health. The methodological approach consisted of a critical analysis of selected literature from the BVS and SciELO databases (2019-2024), using descriptors such as "ADHD", "Latent Inhibition", and "Mental Health" in Portuguese and English. The results highlight the importance of understanding the neurocognitive mechanisms shared between ADHD and LLI, particularly regarding sensory filtering and dopaminergic regulation processes. The analysis points to the need for integrated approaches that consider pharmacological interventions and psychosocial strategies adapted to the particularities of these conditions. It is concluded that effective care must incorporate biopsychosocial perspectives, combining neuroscientific evidence with individualized therapeutic practices. The study reinforces the importance of care models that promote not only symptom reduction but also the development of adaptive skills and quality of life. This theoretical reflection seeks to contribute to discussions on more compassionate and holistic forms of mental health care.

Descriptors: Attention Deficit Hyperactivity Disorder; Mental Health; Low Latent Inhibition; Public Health; Comprehensive Care.**How to cite this article:**

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Resumén

Este estudio propone una reflexión teórica sobre las relaciones entre el Trastorno por Déficit de Atención e Hiperactividad (TDAH) y la Baja Inhibición Latente (LLI), analizando sus implicaciones para la práctica clínica en salud mental. El enfoque metodológico consistió en un análisis crítico de literatura seleccionada de las bases de datos BVS y SciELO (2019-2024), utilizando descriptores como "TDAH", "Inhibición Latente" y "Salud Mental" en portugués e inglés. Los resultados resaltan la importancia de comprender los mecanismos neurocognitivos compartidos entre el TDAH y la ILB, particularmente en lo que respecta a los procesos de filtrado sensorial y la regulación dopaminérgica. El análisis apunta a la necesidad de enfoques integrados que consideren tanto intervenciones farmacológicas como estrategias psicosociales adaptadas a las particularidades de estas condiciones. Se concluye que una atención eficaz debe incorporar perspectivas biopsicosociales, combinando evidencia neurocientífica con prácticas terapéuticas individualizadas. El estudio refuerza la importancia de los modelos de atención que promuevan no sólo la reducción de los síntomas, sino también el desarrollo de habilidades adaptativas y la calidad de vida. Esta reflexión teórica busca contribuir a las discusiones sobre formas más compasivas y holísticas de atención a la salud mental.

Descriptores: Trastorno por Déficit de Atención e Hiperactividad; Salud Mental; Inhibición Latente Baja; Salud Pública; Atención Integral.

Resumo

Este estudo propõe uma reflexão teórica sobre as relações entre o Transtorno do Déficit de Atenção e Hiperatividade (TDAH) e a Inibição Latente Baixa (ILB), analisando suas implicações para a prática clínica em saúde mental. A abordagem metodológica consistiu em análise crítica de literatura selecionada nas bases BVS e SciELO (2019-2024), utilizando descritores como "TDAH", "Inibição Latente" e "Saúde Mental" em português e inglês. Os resultados destacam a importância de compreender os mecanismos neurocognitivos compartilhados entre TDAH e ILB, particularmente quanto aos processos de filtragem sensorial e regulação dopaminérgica. A análise aponta para a necessidade de abordagens integradas que considerem tanto as intervenções farmacológicas quanto estratégias psicossociais adaptadas às particularidades dessas condições. Conclui-se que uma assistência efetiva deve incorporar perspectivas biopsicossociais, combinando evidências neurocientíficas com práticas terapêuticas individualizadas. O estudo reforça a importância de modelos de cuidado que promovam não apenas a redução de sintomas, mas também o desenvolvimento de habilidades adaptativas e qualidade de vida. Esta reflexão teórica busca contribuir para discussões sobre formas mais compassivas e holísticas de atendimento em saúde mental.

Descritores: Transtorno do Déficit de Atenção com Hiperatividade; Saúde Mental; Inibição Latente Baixa; Saúde Pública; Integralidade do Cuidado.

Introduction

In recent decades, there has been a better understanding of the nature of ADHD as a neurodevelopmental disorder with a neurobiological basis, as initially suggested by clinical cases described by George Still in the early 20th century. Attention Deficit Hyperactivity Disorder (ADHD) is a neurobiological disorder with a genetic origin that manifests in childhood and can persist in adulthood, influencing behavior in various contexts. The main characteristics include hyperactivity, impulsiveness and difficulty paying attention. Latent Inhibition (LI), in turn, refers to the ability to filter out irrelevant stimuli, and reduction can increase distraction in some individuals, although it is also associated with greater creativity. Latent inhibition can also be understood as a delay in Pavlovian conditioning, resulting from repeated exposure to unconditioned stimuli¹⁻³.

Currently, the actions of mental health professionals seek to implement measures that promote biopsychosocial health, aligned with the principles of psychiatric reform, and focusing on patient safety. In this study, focused on the analogy of Attention Deficit

Hyperactivity Disorder (ADHD) and Low Latent Inhibition, ADHD is currently observed. It is observed that in patients affected by ADHD, there is the characteristic of inattention, hyperactivity, and impulsivity, and in latent inhibition, the patient does not create associations or meanings with a stimulus presented until a later period. An "invisible block" occurs because it refers to the subconscious mechanism that filters sensory stimuli considered irrelevant at the time. In the research on the study, regarding updated information, the lack of national studies that address these issues in an integrated manner was noted⁴⁻⁶.

Given the above, the objective of this study was to carry out a reflection comparing Attention Deficit Hyperactivity Disorder (ADHD) and Low Latent Inhibition.

Methodology

This study is characterized as a critical theoretical reflection, based on a qualitative analysis of selected literature, to establish conceptual relationships between Attention Deficit Hyperactivity Disorder (ADHD) and Low Latent Inhibition (LLI). The approach adopted does not constitute a systematic or narrative review, but rather an



exercise in conceptual synthesis that articulates scientific evidence with critical analysis, within a neurocognitive and psychiatric theoretical framework.

The theoretical framework was constructed based on consultation of the Virtual Health Library (VHL) and Scientific Electronic Library Online (SciELO) databases, using the descriptors "Attention Deficit Hyperactivity Disorder", "Latent Inhibition", "Mental Health" and their English equivalents. The time frame prioritized publications from the last five years (2019-2024), with strategic inclusion of previous seminal works when necessary for historical contextualization.

The criteria for selecting the material considered direct thematic relevance to the proposed axes of analysis: shared neurobiological mechanisms, comparative cognitive manifestations, and implications for clinical interventions. Priority was given to original articles, peer reviews, and theoretical chapters, excluding isolated case reports and studies without an explicit neuroscientific basis.

The analytical process was developed in three interrelated stages. Initially, the central characteristics of each construct (ADHD and ILB) were mapped based on the specialized literature. Next, points of convergence and divergence in the explanatory models were identified. Finally, a critical analysis was constructed on the implications of this interface for clinical practice and future research.

As a methodological limitation, it is recognized that the reflexive nature of the study does not allow for generalizations or definitive conclusions. The non-exhaustive selection of sources and the qualitative approach imply that the results represent one theoretical interpretation among others. However, this strategy proved to be adequate to fulfill the objective of problematizing the relationships between ADHD and ILB in a contextualized and well-founded manner.

Results and Discussion

In 1980, the American Psychiatric Association replaced the terms Minimal Brain Dysfunction (MCD) and hyperactivity with Attention Deficit Disorder (ADD), and in 1994, it introduced the term Attention Deficit/ Hyperactivity Disorder (ADHD). However, some European countries still use the terms Minimal Brain Dysfunction or Hyperactivity, and France refers to the condition as Hyperkinetic Syndrome. Although ADHD is widely recognized today, the understanding of the disorder has evolved, going through several names, such as brain injury and minimal attention deficit disorder, until it was formally recognized as ADHD^{7,8}.

The authors of a study considered low Latent Inhibition to be of great interest in learning theories and in the context of mental health, but its greatest merit is to provide an important model for the neurobiological study of schizophrenia, a mental illness that affects thinking. Schizophrenic patients, especially during the acute phase of the illness, show a decrease in IL. This problem was already indirectly recognized in early studies of schizophrenia, which spoke of a loss of the ability to filter or ignore irrelevant stimuli. IL may also be useful for studying other conditions, such as ADHD and cognitive deficits^{6,7}.

In contrast, latent control can be compared to a camera filter: it prevents repetitive and irrelevant images from being recorded, allowing the lens to focus on what is new and important. This process helps the brain avoid sensory overload, ignoring familiar and unnecessary stimuli. Neurologically, latent stress is linked to dopamine, a neurotransmitter responsible for attention and learning. Individuals with low latent stress have more dopamine, which can increase creativity but also the risk of psychological disorders, compared to those with high latent inhibition; those with less dopamine tend to be more focused but less creative^{9,10}.

The treatment of ADHD and Latent Inhibition involves social, behavioral, and multidisciplinary intervention actions in addition to pharmacological treatment, which is the last to be adopted. Factors such as memory, attention, language, behavioral, and emotional aspects have a direct interference in the symptoms observed negatively and directly in the child's academic activities. The action of the multidisciplinary team with interventions allows the person with ADHD disorder to have more humanized means of survival, thus exploring potential and development both at home and at school or in the workplace when the individual is an adult. Their action allows us to have an understanding beyond psychoeducation, rationalizing cognitive, behavioral, and neurological issues¹⁰.

It is essential to understand the common neurobiological and cognitive bases between Attention Deficit Hyperactivity Disorder (ADHD) and Low Latent Inhibition, which is essential to identify potential therapeutic targets and develop more effective interventions. Research in this area has revealed that individuals with ADHD often have a reduced ability to filter out irrelevant information, a phenomenon known as Low Latent Inhibition. This condition negatively impacts daily functioning, emotional regulation, and the challenges faced by these individuals, since they tend to be distracted by a myriad of stimuli, making it difficult to concentrate and carry out daily activities.

Conclusion

It is concluded that latent inhibition is a fundamental cognitive mechanism that allows us to focus and effectively process new and relevant information, avoiding sensory overload caused by familiar and inconsequential stimuli in our daily lives. This phenomenon acts as a mental filter, prioritizing what is important and ignoring what is trivial. From a neurological point of view, it is believed that latent inhibition is closely linked to dopamine levels in the brain. People tend to have higher levels of dopamine, which can enhance creativity but also increase the risk of psychological disorders. On the other hand, those with high latent inhibition demonstrate lower dopaminergic activity, being more focused but less creative.

Therefore, latent inhibition plays an important role in the balance between attention and learning, acting as an adaptive mechanism that allows us to deal with the vast array of information that we constantly receive. Understanding this cognitive process is fundamental to understanding the functioning of the human mind and its



implications for behavior and personal development, and its treatment consists of a multimodal approach, managing ADHD and promoting information filtering skills. This holistic approach aims to improve the quality of life of individuals, allowing them to deal more efficiently with the demands of everyday life and better manage their emotions. It is essential to disseminate information and raise awareness, both for health professionals and the academic community, about the connections between these conditions and the importance of an integrated approach. This action will contribute to a better understanding of the specific needs of this public and, consequently, to the development of more assertive and personalized interventions. Understanding the common neurobiological and cognitive bases between ADHD and Low Latent Inhibition opens the way for the

identification of promising therapeutic targets and for the construction of holistic interventions capable of significantly improving the quality of life of individuals affected by these conditions.

Considering the educational scope, it is important to put inclusive strategies into practice, taking advantage of support systems to identify skills and content aligned with school values and culture, as educational inclusion is still under development, both in Brazil and in other countries, and therefore it is important to offer adequate training to the professionals involved, contributing to creating practices that guarantee access to quality education for students affected by ADHD and low latent inhibition, even with the difficulties in this in everyday life, as pointed out in the scientific literature.

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