

## PSYCHIATRIC COMOR- BIDITIES IN CHILDREN WITH NEUROLOGICAL DISORDERS: A NARRA- TIVE REVIEW

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*Lucas Miguel Fernandes de Holanda  
Mariano*

<https://lattes.cnpq.br/0137531481495779>

*Geovana Ponciano Mendonça*

<https://orcid.org/0009-0004-1324-4140>

*Nicole Cardozo Corrêa*

<https://lattes.cnpq.br/3864574142718136>

*Juliana Flávia Moura da Mata*

<https://lattes.cnpq.br/7539230657573800>

*Larissa Luna Barros Sampaio*

<https://lattes.cnpq.br/1448015232177973>

*Carlos Henrique Salvi*

<https://lattes.cnpq.br/1900497079476894>

*Maria de Lourdes de Oliveira Carvalho*

<https://lattes.cnpq.br/3429828616105672>

*Marina Melo Cavalcante*

<https://lattes.cnpq.br/6264684889930788>

*Raul de Carvalho Nunes Martins*

<https://lattes.cnpq.br/9723316571690210>

*Ana Gabriela Momesso Serra*

<https://lattes.cnpq.br/8068665136830527>

*Guilherme Henrique de Araújo Ferreira*

<https://lattes.cnpq.br/5864045884291682>

*Fabian Chris de Lima Mendonça*

<https://lattes.cnpq.br/9546624853478955>

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**Abstract:** Objective: To analyze psychiatric comorbidities in children with neurological disorders. Bibliographical Review: The psychiatric manifestations of brain changes in children constitute an interesting and comprehensive area, although little explored. Understanding the relationships between brain functioning and behavioral problems in childhood is particularly incipient, in part due to the limitations of childhood psychiatry and neurology. There is plenty of evidence that genetic factors are involved in at least some childhood psychiatric illnesses, but the association between genetic inheritance and behavioral problems may be the result of facts that have nothing to do with the brain's neuronal network. For example, genes for skin color, short stature and obesity, depending on the society in which the child lives, can promote social rejection and, consequently, behavioral problems. Final considerations: Psychiatric comorbidities in children with neurological disorders are relatively little studied. It is noted, however, that these patients are at least twice as likely to present psychiatric disorders, which are more related to neurological changes themselves, especially if accompanied by brain damage, than to the presence of other factors, also relevant in the clinical, such as the stigmatizing and/or chronic nature of the neurological problem, cognitive deficit, low socioeconomic level or inadequate family environment.

**Keywords:** Childhood, Psychiatric comorbidities, Neurological disorders.

## INTRODUCTION

The psychiatric manifestations of brain changes in children constitute an interesting and comprehensive area, although little explored. Understanding the relationships between brain functioning and behavioral problems in childhood is particularly incipient, in part due to the limitations of childhood psychiatry and neurology. Little is known about the classification, etiology, course and management of childhood psychiatric disorders.

Children with neurological injuries, such as those with epilepsy, are at high risk of developing comorbidities such as: anxiety, sleep disorders, psychosis, attention deficit hyperactivity disorder (ADHD), in addition to learning problems and suicide (ILAE PEDIATRIC COMMISSION, 2018), and at least half of these children will continue to have symptoms into adulthood (CARTWRIGHT-HATTON, 2006; STEENSEL & BÖGELS & PERRIN, 2011; FISHER, ACEVEDO, ARZIMANOGLU, 2014).

The presence of neurological changes is not an entirely non-specific factor, which would increase the risk for the presence of all psychiatric disorders, following their distribution in the general population. Of the children without any neurological changes, but with psychiatric disorders, the majority have conduct disorder, emotional disorder (affective or anxiety) or a combination of the two. These are also the most common disorders in children with epilepsy and/or cerebral palsy, however, these children particularly have a higher incidence of hyperactivity. There are several studies showing associations between certain brain abnormalities and specific psychiatric disorders (for example: chorea and obsessive-compulsive disorder; developmental abnormalities of the left temporal lobe and adult schizophrenia).

## LITERATURE REVIEW

Reversible brain changes may originate not from permanent neuronal abnormalities, but from delays or precociousness in neuronal maturation. Obstetric and neonatal complications are common but generally harmless. According to Freeman and Nelson, even serious complications are not usually harmful, and of the children with cerebral palsy who had complications during birth, many had congenital malformations or microcephaly, suggesting that these fetuses were already altered before birth. For epilepsy, prenatal risk factors are more important than perinatal ones. Obstetric and neonatal complications also do not usually cause minimal brain damage, which would only be noticed by language and behavioral difficulties (as obstetric complications and changes in language and behavior are frequent events in the population, the concomitant presence of both may be due to chance and have no etiological significance).

There is plenty of evidence that genetic factors are involved in at least some childhood psychiatric illnesses, but the association between genetic inheritance and behavioral problems may be the result of facts that have nothing to do with the brain's neuronal network. For example, genes for skin color, short stature and obesity, depending on the society in which the child lives, can promote social rejection and, consequently, behavioral problems. The presence of a specific behavioral syndrome is often taken as sufficient evidence that the child has an abnormal brain; however, few behavioral syndromes are associated, with independent evidence, with brain abnormalities (with the exception of progressive dementia, severe mental retardation and, perhaps, autism).

It is important to highlight that children with neurological disorders are also subject to the most common risk factors in the population,

such as belonging to a dysfunctional family, without emotional support. Thus, the rate of psychiatric disorders in the population of children with neurological problems, which is a population at risk, can be reduced by reducing the number of risk factors present. On the other hand, prospective studies show that many children with brain changes develop psychiatric problems, even in healthy environments.

## IMPORTANCE OF APPROPRIATE CONDUCT

Psychiatric disorders in children with neurological changes must be treated in the same way as those found in neurologically preserved children. Biological treatments are no more or less useful than ordinary psychiatric practices. The indications for psychotropic drugs in the treatment of children with psychiatric disorders and brain disorders differ little in relation to usual practices. The diagnosis of epilepsy is not a strong contraindication for the use of neuroleptics and antidepressants, even though these drugs may increase the frequency of seizures, as these are controlled by adjusting the dose of the anticonvulsant. The evidence of neurological changes as a risk factor for tardive dyskinesia induced by neuroleptics is not very consistent. Psychostimulants can be very useful in the treatment of hyperactivity in children with neurological disorders, although the risk of depressive symptoms arising with the use of these medications is greater than that observed in hyperactive children without neurological disorders.

## FINAL CONSIDERATIONS

Psychiatric comorbidities in children with neurological disorders are relatively little studied. It is noted, however, that these patients are at least twice as likely to present psychiatric disorders, which are more related to neurological changes themselves, especially if accompanied by brain damage, than to the presence of other factors, also relevant in the clinical, such as the stigmatizing and/or

chronic nature of the neurological problem, cognitive deficit, low socioeconomic level or inadequate family environment. The risk is greater for all childhood psychiatric disorders, but is particularly increased for hyperactivity. The treatments recommended for children with neurological problems and psychiatric disorders are the same as those recommended for children with psychiatric disorders who do not present neurological changes.

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