

CHILDHOOD DEPRESSION AND PSYCHOCOGNITIVE DEVELOPMENT: DESCRIPTION OF CAUSALITY RELATIONSHIPS

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ABSTRACT

Mental health disorders provoke important changes on children behavior. The incidence of these pathologies has increased worldwide and they are diagnosed earlier, what start a discussion about their influence on psychosocial development of carrier children. We wanted to describe how depression affects child cognitive development, with changes in cognitive psycho-sphere. Two databases (SciELO and BVS) were surveyed between 2006 and 2011, using the keywords "depression", "children" and "development". After analysis, eight articles were selected and used to construct this work. Results disclose that childhood depression is a negative influence to children cognitive development. In case of illness, child recognizes itself as unable to achieve demands which are betting on it, with feelings of shame, doubt, lack of self-confidence and learning problems, being unable to "make their best". Education professional must be able to recognize these changes manifest in the school environment. Studies showed that a healthy external environment allows for a proper maturation of the cognitive system protects children and childhood depression. While most studies suggest a causal relationship between depression and cognitive impairment, other studies show the inverse relationship in the low cognition generates symptoms of depression. However, it should also be noted that difficulty of learning and childhood depression can coexist without there necessarily a causal relationship between them. It is necessary to diagnose earlier these disorders, making possible to repair injuries in children development.

Key words: depression; child development; childhood depression.

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BACKGROUND

Recently, researches about mental health have achieved some prominence. Specialized literature is emphatic to demonstrate an important increase in the prevalence rates of psychiatric disorders between children and adolescents. This increase oscillates between 1 and 51%, depending on the study¹.

Childhood depression deserves special attention among these psychiatric disorders affecting children, notably because of the potential injuries that this clinical entity can cause for human development. This mood disorder in children and adolescents has been characterized by some frequent symptoms: irritability, somatic manifestations, antisocial behavior and depressed mood. Its clinical presentation lead to recognize it as a distinct disease from that which occurs in adults. These symptoms can act, in the short-term, as sources of psychological distress for these children and in the long-term, can interfere in their cognitive, social and emotional development².

This condition can be presented in children by physical, behavioral, cognitive and social aspects, allowing to understand it as a global psychosocial and biologic phenomenon. According to some studies, changes caused by depression in children and adolescent occur at psychological, organic, cognitive and behavioral spheres at a frequency of 31.42%, 31.42%, 19.70%, 13.97% and 3.49% respectively³.

Changes in psychological and cognitive spheres, despite of having a lower percentage of frequency when compared to others, deserve a stronger attention by scientific community, once significant transformations in these aspects tend to provoke negative effects on children development. These changes can be observed notably in educational environments, represented by learning problems. Psychological and cognitive changes can, in last analysis, cause some kind of avoidance for school tasks, taking the child to a low academic performance. Therefore, the objective of this article is to describe the types of causal relationships between childhood depression and the development of these children.

METHODS

This article is a narrative review. For its composition, two medical databases were surveyed (SciELO and BVS) in the period from 2006 to 2011. For the search, we used the keywords "depression", "children" and "development" together, aiming to find papers containing theses terms in any field. This search returned 14 pertinent articles. In addition to these articles, we have reviewed relevant articles and reference books not available on those databases.

Articles' selection was done manually, and we have excluded those not directly related to depression and child development or those with a diverse approach. Qualitative and quantitative studies, in two languages (Portuguese and English) were considered, representing a total number of eight articles which have based our following results and discussion.

RESULTS

Indexed medical literature describes incisively that depression in this agegroup affects negatively and possibly irreversible child cognitive development. However, this change does not always become apparent. It is difficult for the child to express its feelings in a verbal form. Child's actual development phase is crucial for the shape of their expression mechanisms⁴. Difficulties faced by children at school can often be considered as the first sign showed by these patients when starting the clinical presentation of depression⁵. In this disease process, child is recognized as unable to meet some of imposed requirements. This situation can cause feelings of shame, uncertainty and injury their learning capacity, with consequent harm for self-esteem. These events tend to determine low performance at school, immediately and in their education future⁶.

Describing the cognitive functions that are affected in the process of depression, some authors suggest that in addition to difficulties in concentration and attention, memory and reasoning are also altered, with consequent negative influence for their scholar performance^{7,8}. These children consider impossible to "give their best", in their own words. However, it is necessary to have conscience that in any way such symptoms may be considered in isolation, but rather there must be a simultaneous analysis with regard to its intensity and its duration⁹.

Another important aspect is that children in this age group tend to spend, although not spontaneously, more time into school environment than in familiar living¹⁰. Because of this, the professional educator, who has an extensive amount of knowledge about the stages of child development and on the major symptomatic manifestations of the disease in question, should be able to recognize this disease at an early stage, allowing early therapeutic interventions, aiming to solve short-term problems and to mitigate irreversible impacts of depression for child cognitive development^{4,11}.

DISCUSSION

Children undergo, during their cognitive development, deep changes in some cerebral areas. The presence of early experienced stressful events is one of the most determinant factors for an inadequate brain development⁵. Thus, it is evident the necessity of having healthy environmental conditions that allow an adequate maturation of the cognitive system and serve as protection to the development of depressive illness.

At each stage of their development, children may present specific symptoms, which can often be quite different from those from other phase. It is necessary, therefore, for educators to know the characteristics of normal cognitive development, comprehended each phase, permitting the pathological aspects to become noticeable. You can recognize, at school, by the reduction of scholar performance, direct causal relationships with the manifestation of depression⁴. Early identification will prevent further negative effects on cognitive development of depressed children.

Regarding to the association between childhood depression and learning problems, literature emphasizes on the causal relationship in which childhood depression leads to learning problems. However, we must considerate that these children can be suffering of other psychiatric comorbidities that could affect their cognitive development⁶. In these cases, it is not possible to establish a direct causal relationship between depression and difficulties at school.

In the literature we can also find a discussion about depressed children having an intellectual deficit. Some studies suggest that intelligence is not directly related to depression. By these point-ofview, depressed children do not necessarily have low average intellectual levels. In other words, these children, although having normal capacity, cannot use their full potential by having the cognitive depressive manifestations as an obstacle to its full functioning¹¹. In this context, we recognize the important role that must be done by educators. These professionals provide a more lasting and close contact with children¹². It is now better understood how these professionals' training will allow them to act as important tools in the screening for childhood depression, through the perception of changes in various stages of cognitive development in children.

Finally, childhood depression interferes substantially in the children cognitive development. Family, teachers, doctors, therapists and other professionals who are involved with them must have special attention to learning problems. These difficulties can be signals of early childhood depression, seeking to interve-

REFERENCES

- Assis SG, Avanci JQ, Pesce RP, Ximenes LF. The situation of Brazilian children and adolescents with regard to mental health and violence. Ciênc. saúde coletiva. 2009;14(2):349-361.
- Oliveira JSC, Ribeiro KCL, Araújo LF, Coutinho MPL. Social representations of depression by children with depressive symptomatology. Adv. health psych. 2009;14(2):160-170.
- Couto MCV, Duarte CS, Delgado PGG. Child mental health and public health in Brazil: current situation and challenges. Rev. bras. Psiquiatr. 2008;30(4):384-389.
- Fernandes AM, Milani RG. A depressão infantil, o rendimento escolar e a autoeficácia: uma revisão da literatura. Rev. cesumar. 2010; 30(4): 384-389.
- Santos BS. Uma cartografia simbólica das representações sociais. Rev Crít Ciênc Soc 1988;24:139-172.
- Jamison KR. Uma mente inquieta: memórias de loucura e instabilidade de humor. São Paulo: Martins Fontes; 1996. pp.46-9.
- 7. Oliveira PA, Scivoletto S, Cunha PJ. Neuropsychological and neuroima-

ne in a disease process, mainly by reducing the deficits in intellectual function.

Cognitive difficulties caused by childhood depression can have a negative effect, both for financial and social aspects. Children with these kind of limitations tend to become adults with impaired intellectual development, making more difficult their acceptance in the labor market and the construction of solid social bonds.

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ging studies associated with emotional stress during childhood and adolescence. Rev. psiquiatr. Clín. 2010;37(6):271-279.

- Solomon A. Demônio do meio-dia: uma anatomia da depressão. Rio de Janeiro: Objetiva; 2002. pp.38-9.
- Allen-Meares P, Colarossi L, Oyserman D, DeRoos Y. Assessing depression in childhood and adolescence: a Guide for social work practice child and adolescent. Social Work Journal. 2003;20(1):5-20.
- 10. Cruvinel M, Boruchovitch E. Depressive symptoms, learning strategies and academic achievement among elementary school students. Psicol. estudo. 2004;9(3):369-378.
- 11. Cowan CP, Cowan PA, Pruett MK, Pruett K. An approach to preventing coparenting conflict and divorce in lowincome families: strengthening couple relationships and fostering father's involvement. Family process. 2008;46(1):109–121.
- Avanci J, Assis S, Oliveira R, Pires T. When living with violence brings a child close to depressive behavior. Ciênc. saúde coletiva. 2009; 14(2): 383-394.