

CHILD NEURODEVELOPMENT, SCREEN USE AND PARENTAL STRESS: WHAT IS THE CONNECTION?**NEURODESARROLLO INFANTIL, USO DE PANTALLAS Y ESTRÉS PARENTAL: ¿CUÁL ES LA CONEXIÓN?****NEURODESENVOLVIMENTO INFANTIL, USO DE TELAS E ESTRESSE PARENTAL: QUAL É A CONEXÃO?****Bianca Machado Cruz Shibukawa¹**

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Child development has several determining factors, ranging from the genetic makeup of the parents to the environmental conditions in which the child will grow up. Therefore, assessing the neurological development of children is essential to assess fine and gross motor skills, cognition, language proficiency, problem-solving ability, and psychosocial communication. Monitoring child health therefore includes not only analyzing healthy growth, but also assists in the early identification of possible neurodevelopmental delays, which allows for the identification of children at risk of underdevelopment and early interventions⁽¹⁾.

The reasons for a child to have developmental delays may be due to lack of stimulation, malnutrition, prematurity, genetic and environmental factors, among others. However, with the change in family dynamics due to women entering the job market, economic crises, globalization and easy access to the internet, parents are offering screens to their children to entertain, reward, educate and even calm them down⁽²⁾. However, the disordered use of screens is associated with adverse somatic outcomes such as overweight, impaired sleep, hypertension, metabolic disorders, poor academic performance, poor social interaction, delayed development of language, cognitive and attention skills⁽³⁾.

Given the well-known harmful effects of early and excessive screen time in children, the World Health Organization (WHO) does not recommend screen time for children under two years of age, and that children aged two to five should not spend more than one hour of screen time per day. However, despite the WHO recommendations and the negative results of excessive screen time, the use of screen time before the age of two is frequently cited in the literature⁽¹⁻⁴⁾.

A study conducted in China revealed that the profile of families that expose their children to excessive screen time is made up of young parents, with a lower level of formal education, low per capita income and with negative emotional issues such as depression, stress and Anxiety⁽³⁾. However, families worldwide have gained widespread access to mobile devices such as cell phones and tablets, which has made it easier to provide screen time to children⁽³⁻⁵⁾.



The reasons for early and excessive screen time are diverse and vary according to the family situation, but can be didactically divided into two groups: family-centered reasons and child-centered reasons. The reasons related to the child include the possibility of learning new skills, knowledge, entertainment and preventing boredom. The reasons related to the family include keeping the child occupied so that their daily activities can be carried out, in addition to reducing parental stress that can arise when caring for children⁽⁵⁾.

Families are functional units that require dedication to maintain themselves. Maintaining a balance between personal needs, professional life, activities inherent to domestic life and raising children is not a simple task. Therefore, the use of screens is used as a convenient childcare device, which sometimes leads to their excessive use⁽³⁾. It is known that the massive use of technologies is a global trend; however, it is necessary to be self-critical about when the child will be exposed to screens, and for what reason. It is also worth noting that early exposure to screens can harm normal brain development, due to neurochemical and anatomical changes in the brain, and eventually lead to health-related, behavioral and emotional quality of life problems⁽³⁾. Therefore, it is up to health professionals to constantly advise families on the risks of screen use, as well as to outline strategic plans to identify and treat parental stress, in addition to being alert to signs of neurodevelopmental delays.

REFERÊNCIAS

- 1- Zoumenou R, Bodeau-Livinec F, Chausseboeuf L, Boivin MJ, Wendland J. Is Neurodevelopmental Assessment in Early Childhood Predictive of Performance Assessed Later in Childhood and Adolescence in Sub-Saharan Africa? A Systematic Review of the Literature. *Arch Clin Neuropsychol*. 2024; 39(1):98-116. doi: 10.1093/arclin/acad051.
- 2- Jourdren M, Bucaille A, Ropars J. The Impact of Screen Exposure on Attention Abilities in Young Children: A Systematic Review. *Pediatric Neurology*. 2023; 142: 76-88. doi: 10.1016/j.pediatrneurol.2023.01.005.
- 3- Xiang,H, Lin L, Chen W, Li C, Li J, Ren Y, et al. Associations of excessive screen time and early screen exposure with health-related quality of life and behavioral problems among children attending preschools. *BMC Public Health*. 2022; 22(2440): 1-12. doi: 10.1186/s12889-022-14910-2.
- 4- Ma S, Li J, Chen EE. Does Screen Media Hurt Young Children's Social Development? Longitudinal Associations Between Parental Engagement, Children's Screen Time, and Their Social Competence. *Early Education and Development*. 2022; 35(1): 10–25. doi:10.1080/10409289.2022.2151401
- 5- Brauchli V, Sticca F, Edelsbrunner P, von Wyl A, Lannen P. Are screen media the new pacifiers? The role of parenting stress and parental attitudes for children's screen time in early childhood. *Computers in Human Behavior*. 2024; 152:108757. doi: 10.1016/j.chb.2023.108057.



Declaration of conflict of interests

Nothing to declare.

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