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EDITORIAL

Let's make pediatric physical therapy a true evidence-based field! Can we count on you?



It has been five years since the publication of the systematic review by Novak et al.¹ that reported levels of evidence for 64 interventions for children with cerebral palsy (CP) across the world – green light (do it), yellow light (moderate evidence – assess the results) and lack of evidence (don't do it). We are challenged to think about what has changed in the national and international scenario: are we the same physical therapists as 5, 10, or 20 years ago? Have we changed our practice to keep up with best evidence and family-centered services that engage children and families in goal-setting and intervention planning?

The 2018 Brazilian Conference of Physical Therapy, brought us rich discussions on different areas of our profession, with special emphasis in pediatric physical therapy. In the "Situation and Perspectives of Neuropediatric Physical Therapy in Brazil" and "Evidence and Decision-making in Physical Therapy" sessions, speakers presented the latest evidence in the field of pediatric rehabilitation and discussed barriers to the implementation of these practices in professional education, research and clinical practice to an audience of undergraduate and graduate students, and physical therapists across various levels of professional experience.

Access to scientific information was scarce in Brazil 20 years ago. Clinical practice was based mostly on empirical knowledge and information from textbooks and (occasionally) from scientific papers ordered from public universities' libraries around the country. Along this same temporal window, almost 20 years have passed since the publication of the International Classification of Functionality, Disability and Health (ICF) by the World Health Organization (WHO),² and it seems that it has finally started to be used country-wide as a common framework, or at least as a new set of terms for describing what we do, based on the scientific presentations at the Brazilian Conference of Physical Therapy. It is worth reflecting if, besides being a new set of terms, the ICF is also transforming assessments and interventions used in pediatric physical therapy, or if our practice is still focused on body structures and functions, rather than on

activity, participation, and contextual factors (physical environment, social environment, attitudinal environment, and personal factors unrelated to a child's health condition). No two children and families have the same contextual factors, hence the importance of environmental and personal factors for outcomes that are meaningful in the daily lives of children.

Extensive research has shown the role of the environment – physical, social and attitudinal – as potentially modifiable variables to improve activity and participation levels of children with disabilities, such as CP.³ Goal-directed, context-based therapies, home programs and task-oriented training, are examples of top-down interventions graded as "Do it" by Novak et al.¹ that emphasize the importance of person-environment interactions for children's activity and participation in daily life.⁴

The efficacy of the neurodevelopmental approach has been questioned for decades, with recent systematic reviews concluding from the preponderance of scientific evidence it is ineffective (red light – don't do it) to improve motor activities in children with CP. Unfortunately, it is still the preferred method of intervention for children with CP in Brazil, which demonstrates the need for a profound reflection on our clinical practices. Although updates to the method include components of newer techniques (e.g., task-oriented training), therapists are left with confusion regarding their practice as many other components are not evidence-based. Similarly, several techniques that are not based on voluntary effort on the part of the child and functional movements (e.g., Vojta, Cuevas-Medek) should be discontinued based on current evidence.

Another potential barrier to evidence-based practice in our scenario is the organization of the health systems, which often do not prioritize evidence-based therapies. Despite the need to reduce costs in health care, therapies with lower levels of evidence (e.g., intensive suit therapies)⁵ are often performed in several public settings, without knowledge of which of the many components may be effective or which groups of children may benefit (if any), and at what doses.

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Moving towards the best evidence available is, therefore, important for cost-effectiveness and will be a fundamental step towards improving the recognition of our profession.

Current scientific knowledge supports the implementation of therapies that are: (1) family-centered, i.e., the child and family should be involved in all aspects of decision-making, informing personal priorities to health care professionals; (2) directed by the family's functional goals for their child; and (3) promote participation as a primary outcome, implementing task accommodations and environmental modifications whenever needed to maximize activity and participation at home, school, and in the community.^{6,7} This does not diminish the importance of management and prevention of impairments in body structures and functions, but emphasizes the importance of providing children opportunities for learning to move in 'real-life' (natural) environments and while engaged in meaningful activities. We must also increase our efforts to provide multidisciplinary care, as the complex needs of children with disabilities and their families cannot be appropriately met without interaction and communication among health care professionals.⁸

On the research side, there is still a long way to go. Much research is needed to increase our understanding on how to optimize the process of neuroplasticity to promote function. Until more answers are available, physical therapists must use caution when implementing interventions that have not been studied in depth (yellow light). It is also mandatory that scientific knowledge be considered in the design of health policies. Out of a public health context, we acknowledge that informed decisions for therapies without evidence are a right of every family who opt for them; however the onus is on us to ensure that families are thoroughly informed before deciding.

Unlike 20 years ago, access to scientific knowledge for professionals as well as consumers is currently fluid and fast. Knowledge-translation (KT) strategies are now used to promote change in practice scenarios,⁹ even in a vast country with so many social and cultural challenges as Brazil. KT research shows that scientific information may take up to 17 years to be incorporated into clinical practice.¹⁰ Readiness to change may be a facilitator or a barrier to implementing scientific knowledge. Knowledge-brokers are key figures in spreading information and promoting new practices in health care settings.¹¹ On the other hand, there are professionals who act as active resistors – although they have access to scientific knowledge, they resist to abandon the techniques they have embraced and adopt evidence-based approaches instead. We understand that change is often difficult but encourage therapists to consider "new possibilities" and expand horizons and engage children and families in conversation about what they would like to do or need to do in daily life.

Our reflection today is: which side do you support? Are you a knowledge-broker or an active resistor? We need more activists to change the current scenario. Together we can promote evidence-based practice in pediatric physical

therapy and give all children and families the best care that they deserve. Can we count on you?

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