

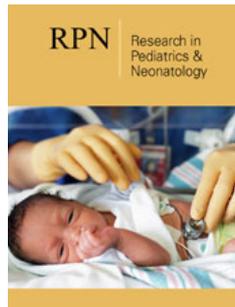
Deimplementation of NDT in CP is Required? Many Reasons for Not Doing it!!!!

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Commentary

The recent meta-analysis [1] related with Cerebral Palsy (CP) and Bobath Concept/NDT (Neurodevelopmental Treatment) about the deimplementation of NDT is raising many questions by competent professionals in the knowledge of CP. The Bobath Concept is not only a technique of treatment of CP but also an Approach to manage people with CP and other neurologic motor disorders. This includes several aspects like: to be aware of the daily routine, activities and participation, qualitative and quantitative evaluations, clinical reasoning after the goals be established with the patient/family, choose of strategies to get the goals, and finally check the results comparing with baseline assessment.

The Bobath Concept course have been given from many decades and many students have been certificated. In my experience as a Bobath course instructor I have received unanimous feedback from students about their learning and satisfaction about content. It mainly happens because they see the evolution of the children and it is checked with videos showing pre and post tests of the functional task chosen. The written feedback from the parents of the children is also very positive and they are always very grateful for the results seen in their children. Parents opinion should be considered the children as well when they are able to inform it. One of the great advantages of Bobath course is the extensive theory applied into practice for 7 or 8 weeks. During the course the students are able to assess and treat many types of patients from level I to V of Gross Motor Function Classification System (GMFCS) as well different disorders of movement. The course is direct to Physiotherapist, Occupational Therapist and Speech Therapist and the patients are seen as a whole during all courses.

Unfortunately, the authors that are asking for deimplementation may not know deeply about the contents of the course and probably they are not used to be close to children with cerebral palsy, their families and all differences and difficulties they face. Professionals with critical view and authoritative know-how have been showing with property the flaws of these reviews and bias on those conclusions. Many Bobath/NDT associations and even individual professional from different parts of the world have manifested their opinion about this publication [1]. Some comments on this demand for de implementation proposed by this meta-analysis were properly answered and counter-argued.

Those commentaries emphasize some points as methodological flaws due to article selection and interpretation and inappropriate synthesis of data [2]. The AMSTAR-2 (Assessing the Methodological Quality of Systematic Review) applied to examine the quality of these systematic reviews revealed deficiency in multiple elements of robust review and synthesis procedures, and results in a critically low confidence rating [3].

One aspect that called my attention on this meta-analysis is why the authors used the definition of Bobath Concept from Adult Bobath Association [4] instead of use the definitions of Bobath from Neuropediatric Associations or literature. Additionally, authors considered

an obsoleted description of NDT practice in this study [2,5]. Knowledge or research about actual principles of NDT could avoid this limitation in this study.

Another constrain that was not considered in this meta-analysis is that patient groups were mixed, and different subject groups were in the same comparison. The same happens to the dosage that was not always equal [5]. For example, authors made a comparison between the NDT and activity-based approaches. However, they compared 112 hours of Constraint Induced Movement Therapy to 16 hours of NDT. In my opinion the bias starts to compare Constraint Induced Movement Therapy, that is a restrictive protocol, with NDT that is one approach that involves all body. Furthermore, NDT is not a protocol but a flexible way of approach as we follow the motivation and actions of the children to conduct our therapy. It is not necessary to say how important is to use the same dose between the groups for a reliable result.

Another important bias of this meta-analysis was that the conclusions made were not an analysis of evidence but were clinical practice guidelines developed with an unvalidated tool called the "Traffic Light ALERT System" [3]. I would like to ask the evidence to

apply an unvalidated tool to establish a guideline. I believe in the next future we could be able to show the evidence in studies what we do see in the practice of the Contemporary Bobath Concept in the clinical practice as well as we see in the courses. Important challenges to develop these studies are the variability observed among individuals with cerebral palsy and the individualized approach based on NTD.

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