## Relevance Of Cognitive Rehabilitation Amongst Children Having Chronic Illnesses - A Theoretical Analysis

Authors : Pulari C. Milu Maria Anto

Abstract : Background: Cognitive Rehabilitation/Retraining has been variously used in the research literature to represent non-pharmacological interventions that target the cognitive impairments with the goal of ameliorating cognitive function and functional behaviors to optimize the quality of life. Along with adult's cognitive impairments, the need to address acquired cognitive impairments (due to any chronic illnesses like CHD - congenital heart diseases or ALL - Acute Lymphoblastic Leukemia) among child populations is inevitable. Also, it has to be emphasized as same we consider the cognitive impairments seen in the children having neurodevelopmental disorders. Methods: All published brain image studies (Hermann, B. et al,2002, Khalil, A. et al., 2004, Follin, C. et al, 2016, etc.) and studies emphasizing cognitive impairments in attention, memory, and/or executive function and behavioral aspects (Henkin, Y. et al, 2007, Bellinger, D. C., & Newburger, J. W. (2010), Cheung, Y. T., et al, 2016, that could be identified were reviewed. Based on a systematic review of the literature from (2000 -2021) different brain imaging studies, increased risk of neuropsychological and psychosocial impairments are briefly described. Clinical and research gap in the area is discussed. Results:30 papers, both Indian studies and foreign publications (Sage journals, Delhi psychiatry journal, Wiley Online Library, APA PsyNet, Springer, Elsevier, Developmental medicine, and child neurology), were identified. Conclusions: In India, a very limited number of brain imaging studies and neuropsychological studies have done by indicating the cognitive deficits of a child having or undergone chronic illness. None of the studies have emphasized the relevance nor the need of implementingCR among such children, even though its high time to address but still not established yet. The review of the current evidence is to bring out an insight among rehabilitation professionals in establishing a child specific CR and to publish new findings regarding the implementation of CR among such children. Also, this study will be an awareness on considering cognitive aspects of a child having acquired cognitive deficit (due to chronic illness), especially during their critical developmental period.

**Keywords :** cognitive rehabilitation, neuropsychological impairments, congenital heart diseases, acute lymphoblastic leukemia, epilepsy, and neuroplasticity

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