

Unmet Need of Orthotic and Prosthetic Rehabilitation Services in Early Intervention Centers in India

The World Health Organization (WHO) definition of rehabilitation is “a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment [1].” It improves the life of people with disabilities through the optimization of function, and makes participation in education, work, recreation and meaningful life roles possible. Early intervention is a “system, service and support design to manage and progressively control developmental delay and improve physical, cognition and emotional behavior and ability to adapt to society [2,3].” Data indicates that nearly 250 million children are at risk of suboptimal development in developing countries [4]. In India, the prevalence of disabilities among children below six years was found to be 8.8 per thousand in Delhi, 6.5 per thousand in Jaipur and 12.6 per thousand in Lucknow in a study carried out by the Indian Council of Medical Research (ICMR) task force [5]. However, uniform surveillance of birth defects was still unavailable [6].

The objective of early intervention centers (EIC) in India is to facilitate the screening of children in the age group 0-6 years, and accessible treatment and management of Defects at birth, Diseases, Deficiencies and Development delays [7]. The implementation of EIC is achieving the established goal and functional outcome for children treated and managed in the centers across India with structured medical and rehabilitation professionals services. However, one major rehabilitation component is left behind/untouched is prosthetics and orthotics, which can provide added well-being through their services to make the children more functional in their later part of life. Prosthetics and orthotics is a healthcare and rehabilitation specialty that deals with the assessment, prescription, design, fabrication, fitment and training of prosthetic and orthotic devices for various musculoskeletal dysfunctions, neurological impairments and insufficiencies such as congenital loss and accidental or traumatic amputations [8]. The prosthetist and orthotist are the trained to take the lead for such devices, and are registered professions with the Rehabilitation Council of India (RCI).

At EIC, after screening, assessment for specific intervention management is done, such as medical, thera-

peutic and provision of aids (orthoses/prostheses) [6]. Orthoses improve poor gait and align the body to prevent contracture, weakness, and deformity.

To have the greatest effect on the child population health, attention needs to be given to the systems that deliver early medical and rehabilitation services, providing skills to the rehabilitation workforce and monitoring the medical and rehabilitation delivery. At the same time, early intervention rehabilitation plays an essential role in achieving functional health outcomes in children below six years. Therefore, recognizing prosthetic and orthotic contributions to promoting quality of life and optimal functioning is fundamental to correct the disparity. The research community must also utilize a systematic approach for generating evidence for orthotic and prosthetic intervention in children with disabilities in developing countries.

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REFERENCES

1. Rehabilitation [Internet]. Accessed Jan 5, 2023. Available from: <https://www.who.int/news-room/fact-sheets/detail/rehabilitation>
2. Romero-Galisteo RP, Blanco-Villaseñor Á, Moreno-Morales N, Gálvez-Ruiz P. Early intervention and perceived quality. *Medicine (Baltimore)*. 2019;98:e15173.
3. Baker BL, Feinfield KA. Early intervention. *Current Opinion in Psychiatry*. 2003;16:503-9.
4. Olusanya BO, Davis AC, Wertlieb D, et al. Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016. *Lancet Glob Heal*. 2018;6:e1100-21.
5. Ganguly NK, Satyanarayana K, Srivastava VK, Kant L, Sah Bela MV. Prevention of disability in children. *Int Rehabil Rev*. 1979;3.
6. Rashtriya Bal Swasthya Karyakram. Setting up district early intervention centres: operational guidelines child health screening and early intervention services under NHM. 2014. Accessed on Jan 5, 2023. Available from: <http://cfw.ap.nic.in/pdf/DEIC Operation Guidelins.pdf>
7. Rashtriya Bal Swasthya Karyakram (RBSK). National Health Mission. Accessed Jan 5, 2023. Available from: <https://nhm.gov.in/index1.php?lang=1&level=4&sublinkid=1190&lid=583>
8. Kumar A, Vinita. Current status of prosthetic and orthotic rehabilitation services in india: its issues and challenges. *Front Heal Informatics*. 2021;10:55.