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Letter to the Editor

The silent crisis of lost potential: bridging the gap in pediatric neurorehabilitation for Southeast Asia's forgotten children

Sir,

Neurodevelopmental delays persist at alarming rates in Southeast Asia, yet region-specific neurorehabilitation services remain critically underdeveloped. Despite well-documented risk factors the infrastructure for early intervention is inadequate. This review underscores the imperative for comprehensive, strategies to bridge these systemic gaps in the neuroscience of early childhood development.

Neurodevelopmental delays are an effectual issue among pre-adolescents, with no significant change in the prevalence of neurodevelopmental issues in 2016 (8.4%, 95% CI=7.7 to 9.1) as compared with 1990 (8.9%, 95% CI=8.2 to 9.5).[1] In Southeast Asia, the prevalence of developmental delays among children are alarmingly prevalent, yet access to specialized neurorehabilitation services tailored to their needs is severely limited.[2]

A Literature review published by Mousavi et al underscores that the rehabilitation information systems are well established in the developed countries but in southeast Asian countries the comprehensiveness of similar services is scarce and questionable.[3] Direct correlation of risk factors associated with the development of neurorehabilitation issues including low socioeconomic status, lack of parental education, inadequate nutrition, poor healthcare services and adverse in utero environments leading to children born small for gestational age (SGA) and how these aforementioned risk factors are highly prevalent in southeast Asian countries have been established in the literature.[4]

The absence of customized neurorehabilitation services yields profound ramifications for afflicted children and their families. Absent timely intervention, children grappling with developmental delays risk enduring challenges throughout their lives, encompassing impediments in communication, social integration, and autonomy.[5] Moreover, the economic burden of caring for individuals with untreated developmental delays can be substantial, placing additional strain on already resource-constrained healthcare systems. In contrast to the situation in Southeast Asia, developed countries have made significant strides in establishing comprehensive neurorehabilitation programs for paediatric populations as illustrated by Hadders et al.; the effectiveness of early intervention programs in improving outcomes for children with cerebral palsy, a common cause of motor impairment in childhood.[6]

In Southeast Asian countries, there is an urgent need for the development and systematic implementation of specialized neurotic services, given the high risk of paediatric populations and prenatal cohorts. The existing gaps in early detection and rapid intervention of important determinants affecting child neurodevelopment highlight the need for a regional approach to tailoring, ranging from perinatal insults and malnutrition to environmental and genetic assessments. Furthermore, the interplay of socioeconomic disparities, inadequate healthcare infrastructure, and limited accessibility to specialized neurological care further compounds the challenges faced by this vulnerable demographic. This requires a paradigm shift in health guidelines and encourages intersectoral cooperation to fill existing gaps in neurological development.

In conclusion, to overcome some of the barriers for South-East Asian countries in accessing healthcare, such as, scarcity of resources (infrastructure, human resources, screening tools, budget) and services need to be provided at the start of preconception, prenatal, perinatal, and postnatal periods, and then continue to infancy, childhood, adolescent, and adult stages. Important public health strategies for all settings, including prevention, promotion, early detection, early diagnosis, early intervention and improving positive outcomes, by providing care at the earliest possible stages, should be based on the window of opportunity of child brain development.

Nabeel Ahmad[1], Muhammad Ibrahim Khalil[2]*

[1]Lahore General Hospital, Lahore, Punjab, Pakistan
[2]Ameer-Ud-Din Medical College, Khyber Medical College, Lahore, Punjab, Pakistan

***Correspondence to**
Dr. Muhammad Ibrahim Khalil,
E-mail: Ibmk4676@gmail.com

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