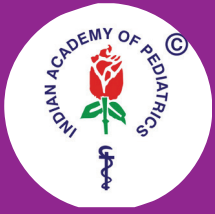


OCTOBER-DECEMBER 2024



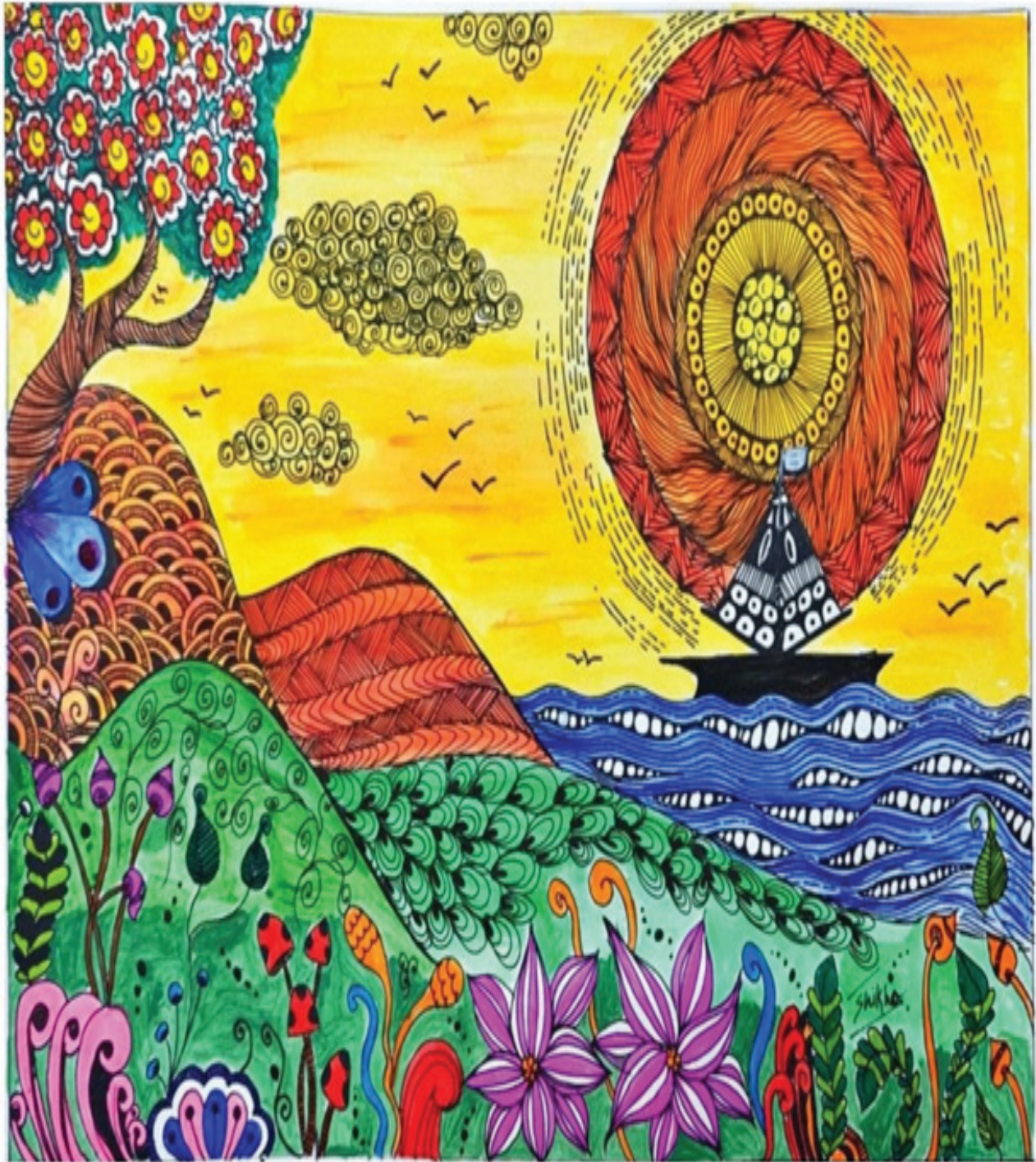
# DPT



## DEVELOPMENTAL PEDIATRICS TODAY

Your monthly booster for developmental and behavioural news!

The Official Newsletter of the IAP Chapter of Neurodevelopmental Pediatrics



**'Navigating Tides Towards  
Brighter Future'**

**Dr Shikha Garg**  
Developmental Pediatrician  
Jaipur

Chief Editor : **Dr Samir Dalwai**

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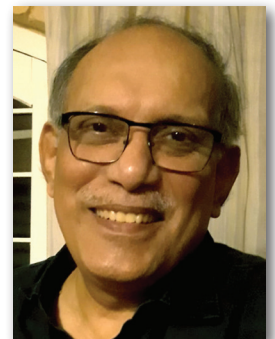
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**Dr Anoop Verma**

**Dr Leena Deshpande**

**Dr Anjali Gokarn**

**Dr Pubali Deka**

**Dr Susan Zacharia;**

**Dr Nimmy Joseph**

**Dr Anshuman Verma**

**Dr Indu Surana**

**Dr Sreetama Chowdhury**

## INTERACTIONS – THE EDITORIAL

DR SAMIR H DALWAI

Dear Colleagues and Friends,

As we approach the close of 2024, I am filled with gratitude and pride for the incredible work and dedication displayed by our members in advancing the field of Developmental and Behavioral Pediatrics. This past year has been a testament to our collective passion for learning, innovation, and collaboration, ensuring that children with developmental challenges receive the best possible care.



Our chapter has witnessed significant growth, with an increasing number of young and enthusiastic developmental pediatricians making their mark across the country. It is heartening to see this vibrant community flourish, and I encourage each of you to continue engaging, sharing, and contributing to this ever-expanding field.

This issue of Developmental Paediatrics Today brings you a wealth of knowledge—ranging from insightful research articles and case discussions to updates on our chapter’s academic endeavors. Notably, the successful completion of the Fellowship Examination at Sri Ramachandra Medical College and the enrollment of our fellowship program with the Indian College of Pediatrics mark important milestones in our journey. Furthermore, our flagship publication, The Indian Journal of Developmental and Behavioral Pediatrics, has received ISSN confirmation and DOAJ access, solidifying its place in the academic world.

In this issue, you will find a compelling journal scan featuring cutting-edge research on cerebral visual impairment and nutrition interventions for children with cerebral palsy. We also bring to you a fascinating case study on Warburg Micro Syndrome with a novel gene mutation, highlighting the importance of genetic evaluations in developmental disorders. Additionally, our ‘Rolling Over – The Other Side’ section presents an exciting update on the FDA-approved video game Endeavor Rx for ADHD management.

As we step into 2025, let us continue to foster awareness about Developmental and Behavioral Pediatrics among pediatricians, allied professionals, and society at large. Our mission remains unwavering: to empower families, optimize developmental trajectories, and build a more inclusive future for all children. I encourage you all to actively participate in chapter activities, share your experiences, and contribute your expertise to Developmental Paediatrics Today.

I extend my best wishes to the incoming team under the able leadership of Dr. Kawaljit Multani. May the chapter continue to grow, inspire, and innovate in the years ahead.

Warm regards,

**Dr Samir H Dalwai**

Chief Editor

Developmental Pediatrics Today

## JOINT ATTENTION - FROM THE OFFICE



As 2024 comes to an end I thank all the members for their active participation in this years academic activities.

As we transition to a new year and new governing committee of the chapter with Dr Multani at it's helm my best wishes to the team and a sincere prayer that the glorious academics, learning and bonding at the chapter continues to bloom.

We have been delighted to see many young spirited and enthusiastic Developmental Behavioural Pediatricians grow and make their mark with their work in their regions across the country and even as faculty at various forums.. We hope to see many more as part of the growing family of the chapter as the membership has also shown an encouraging leap this year.

Awareness regarding Developmental Behavioural Pediatrics will need to be increased among Pediatricians, other health care professionals and society and each and every member can contribute to this goal and the journey..The need for the services and the role of the DBP will keep gaining more importance and highlight as parents experience your connect and support in optimising the developmental trajectories of their children ..

The DPT I always feel is and will be the connect between the chapter and you all and hopefully guide and inspire you to translate this awareness to the community.

**Dr Leena Srivastava**

Chairperson

IAP Chapter of Neuro developmental Pediatrics



## JOINT ATTENTION MESSAGE FROM SECRETARY



Dear Members,

It gives me immense delight to share the chapter's updates from October to December 2024, a period bustling with academic and professional engagements.

Our Fellowship examination was successfully conducted at the prestigious Sri Ramachandra Medical College, Chennai with 17 fellows appearing for the assessment. We are pleased to welcome a new batch of 22 fellows who commenced their fellowship for the year 2025-26, marking another milestone in our commitment to nurturing young developmental pediatricians. The chapter's role in shaping professionals and advancing the field in India continues to be significant.

In a new initiative, we have enrolled the chapter's fellowship program with the Indian College of Pediatrics (ICP), further strengthening our academic endeavors. Looking ahead, we are planning an international association for our fellows in the next quarter, fostering global collaboration and learning.

Our quarterly newsletter, Developmental Pediatrics Today (DPT), continues to grow, and The Indian Journal of Developmental and Behavioral Pediatrics has received ISSN confirmation and DOAJ access—an achievement that highlights its academic impact. We extend our sincere appreciation to Dr. Zafr Meenai for his outstanding contributions as Editor-in-Chief in elevating the journal's reach and recognition.

We encourage all members to actively engage with the chapter, share your achievements, and contribute details of programs you have organized. Your efforts inspire and enrich the community, ensuring our collective progress in the field of neurodevelopmental pediatrics.

Best wishes,

**Dr Shambhavi Seth**

Secretary

IAP Chapter of Neurodevelopmental pediatrics

2024-25



# Social Communication (From the States and State Coordinators)

Dr Pubali Deka

Academic Endeavors and awareness  
activities

**IAP CHAPTER OF NEURODEVELOPMENTAL PEDIATRICS**  
PRESENTS A WEBINAR ON  
**Neurobehavioural Disorders**  
What a Pediatrician Should Know-  
Case Based Discussion

■ **22nd OCTOBER 2024**  
■ 4pm -5.30pm

Zoom link  
<https://us06web.zoom.us/j/86484531625?pwd=SGZkdGhka0RvTstlZkEvd0ZlZnN3X008v.1>

Meeting ID:  
86484531625  
Passcode:  
858154

**Dr. Shambhavi Seth**  
Developmental Pediatrician  
Max Healthcare, NewDelhi

**Dr. A. Somasundaram**  
Developmental Pediatrician  
Delouid, Chennai

**Dr. Samir H Dalwai**  
Moderator  
Developmental Pediatrician  
Neurobehavioral CDC, Mumbai

**Dr. Manju Arun**  
Developmental Pediatrician  
Dr. Manju's CDC, Chennai

**Dr. Lal D. V. Nair**  
Developmental Pediatrician  
Savitri CDC & Vikram CDC,  
Chennai

With best wishes from - **THE OFFICE BEARERS OF CHAPTER 2024**

Dr. Leena Srivastava  
Chairperson

Dr. R.S. Multani  
Chairperson-Elect

Dr. Tahir Meenal  
Vice Chairperson

Dr. Samir Dalwai  
National Fellowship Coordinator

Dr. Shambhavi Seth  
Secretary

Dr. Lata Bhat & Dr. A. Somasundaram  
Joint Secretary

Dr. R. Narayanan  
Treasurer

**IAP CHAPTER OF NEURO DEVELOPMENTAL PEDIATRICS**  
In Association with Adolescent Health Academy  
PRESENTS A WEBINAR ON  
**MENTAL HEALTH OF ADOLESCENTS**

**CHIEF GUESTS**  
Dr. GV Basavraja | Dr. Vasant Khalatkar

**Dr. Samir Dalwai**  
MODERATOR

**Dr. Shambhavi Seth**  
CO - MODERATOR

**Dr. Leena Srivastava**  
GUEST OF HONOR

**Dr. Kawajit S Multani**  
CHAIRPERSONS

**Dr. Indu Surana**  
HOST

**PANELISTS / EXPERTS**  
Dr. MKC Nair | Dr. Swati Bhave | Dr. J S Totaji | Dr. Geeta Patil | Dr. Himabindu Singh

**TOPICS**  
Power of 3  
Counseling in Adolescence  
Parenting in Adolescence  
Substance Abuse in Teenagers  
Teenage Sexuality  
Suicidal Behaviours

**7th NOVEMBER, 2024 | 9:00 PM - 10:00 PM**  
Join on Zoom Meeting :  
Meeting ID : 817 4894 8144 | Passcode : 640451

**DISTRICT EARLY INTERVENTION CENTRE GOA IN ASSOCIATION WITH DISTRICT MENTAL HEALTH PROGRAM NORTH GOA PRESENTS**

**CONNECTING DOTS AND BUILDING BRIDGES: ADDRESSING CHILD AND ADOLESCENT MENTAL WELL BEING**

**CHIEF GUEST**  
Dr. Vinodh Joshi  
With Department of Pediatrics, GMC

**GUEST OF HONOR**  
Dr. Manasa Parvathani  
Executive Director  
President, Psychiatric Society of Goa

**Special Invites**  
Dr. Rajivadas Banker  
Medical Superintendent, SSMH

**Dr. Manasa Parvathani**  
Executive Director  
President, Psychiatric Society of Goa

**Dr. Manasa Parvathani**  
Executive Director  
President, Psychiatric Society of Goa

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President, Psychiatric Society of Goa

**Dr. Manasa Parvathani**  
Executive Director  
President, Psychiatric Society of Goa

**Dr. Manasa Parvathani**  
Executive Director  
President, Psychiatric Society of Goa





Awareness on Neuro-Developmental Trajectories of Preterm Infants, Pune



Neurodevelopmental Masterclass, Nagpur



Masterclass on Neuro- Behavioural Paediatrics, Guwahati, Assam



Developmentally Supportive Care Workshop, Hyderabad







## RESPONSE TO NAME CALL - AN EPONYMOUS STORY

# SILVER RUSSELL SYNDROME

Dr K S Multani

Russell Silver syndrome (RSS) is a rare genetic condition characterized by low birth weight, short stature, and discrepancies in limb length. The underlying genetic defects of Russell Silver syndrome affect the body's ability to produce or utilize growth hormone resulting in effects on growth and development. Common signs include delays in

overall development as well as distinct facial features, such as a triangular face, a prominent forehead, and a small mouth and chin. Individuals with Russell Silver syndrome may also experience feeding difficulties and have musculoskeletal defects and genitourinary anomalies. The exact prevalence of the syndrome is currently unknown, but it is

**BACKGROUND**

- \* RARE GENETIC DISORDER characterized by SIGNIFICANT IMPACTS on GROWTH & DEVELOPMENT

**SIGNS & SYMPTOMS**

- \* DEVELOPMENTAL DELAYS
- \* DISTINCT FACIAL FEATURES
- \* FEEDING DIFFICULTIES
- \* MUSCULOSKELETAL & GENITOURINARY ANOMALIES

**DIAGNOSIS**

- \* NETCHINE-HARBISON CLINICAL SCORING SYSTEM (NH-CSS) CRITERIA
  - ~ 4 of 6 CRITERIA, RARELY 3 of 6
- \* GENETIC TESTING
  - ~ HYPOMETHYLATION on CHROMOSOME 11P15.5 or MATERNAL UNIPATERENTAL DISOMY (UPD) on CHROMOSOME 7

**CAUSES**

- \* GENETIC DEFECTS AFFECT GROWTH HORMONE PRODUCTION or UTILIZATION
  - ~ DEFECT in METHYLATION PROCESS in H19/IGF2 GENE on CHROMOSOME 11P15.5

**TREATMENT**

- \* SYMPTOM MANAGEMENT
  - ~ GROWTH HORMONE TREATMENT
  - ~ NUTRITIONAL INTERVENTIONS
  - ~ PHYSICAL THERAPY
  - ~ MULTIDISCIPLINARY CARE



estimated to affect approximately 1 in 30,000 to 1 in 100,000 individuals.

Approximately 35% to 50% of individuals with the syndrome have a specific defect in the methylation process, which regulates gene activation and inactivation. This defect typically occurs in the H19/IGF2 gene on chromosome 11p15.5. The H19 gene serves as a tumor suppressor and controls body growth and development. Hypomethylation of the H19 gene can lead to reduced expression, resulting in improper growth and development, a defining characteristic of Russell Silver syndrome. The IGF2 gene is vital for fetal growth. Normally, its expression is higher on the paternal chromosome. Changes in DNA methylation within the H19/IGF2 region can disrupt the regulation of these genes, leading to decreased growth, development, and other clinical features of Russell Silver syndrome. In 7% to 10% of cases, Russell Silver syndrome is caused by maternal uniparental disomy (mUPD7), which occurs when an individual inherits both copies of chromosome 7 from their mother, lacking any contribution from their father. As a result, important genes related to growth and development located on the father's chromosome are lost. Additionally, a small number of individuals with Russell Silver syndrome have duplications, deletions, or translocations involving the imprinting centers at 11p15.5 or chromosome 7. Lastly, in rare cases, specific variants in genes like CDKN1C, IGF2, PLAG1, and HMGA2 have been associated with the development of Russell Silver syndrome.

The signs and symptoms of Russell Silver syndrome include a prominent forehead, a triangular shaped face, micrognathia (i.e., a small jaw), dental crowding, and down-turned corners of the mouth. Babies with this condition are typically born smaller than average for their gestational age, often with a larger head circumference compared to their body weight

and length. After birth, affected individuals generally experience growth failure, which can lead to a progressive discrepancy in limb length and body asymmetry. Feeding difficulties (e.g., poor appetite, fussiness, slow feeding) are also common. Other clinical features of Russell Silver syndrome include a high-pitched voice, diminished muscle mass, shoulder dimples, hypoplastic elbow joints, and clinodactyly of the fifth finger (i.e., curved fifth fingers). Additional symptoms may include scoliosis, excessive sweating, fasting hypoglycemia, speech delay, motor delay, and genitourinary anomalies. The closure of the anterior fontanelle (i.e. the soft spot on a baby's head) may also be delayed.

Russell Silver syndrome is diagnosed during childhood based on physical and developmental characteristics. A special scoring system called the Netchine-Harbison Clinical Scoring System (NH-CSS) has been created to help clinicians identify the condition accurately and sensitively. To receive a clinical diagnosis, an individual must have other disorders ruled out and meet at least four of the NH-CSS criteria, two of which must be relative macrocephaly at birth and frontal bossing. The criteria for diagnosis include the following six criteria:

- Small for gestational age (SGA) (birth weight and/or length  $\geq 2$  standard deviations below the mean for gestational age)
- Postnatal growth failure (length/height  $\geq 2$  standard deviation below the mean at 24 months)
- Relative macrocephaly at birth (head circumference  $> 1.5$  standard deviations above birth weight and/or length)
- Frontal bossing or prominent forehead (forehead projecting beyond the facial plane on a side view as a toddler)

- Body asymmetry (limb length discrepancy  $\geq 0.5$  cm, or  $< 0.5$  cm with  $\geq 2$  other asymmetric body parts)
- Feeding difficulties or body mass index  $\leq 2$  standard deviations at 24 months or current use of a feeding tube or cyproheptadine for appetite stimulation

If an individual meets four of these six criteria, a clinical diagnosis of Russell Silver syndrome is suspected and further testing is necessary for confirmation. In some rare cases, individuals who meet three of the criteria have also tested positive for Russell Silver syndrome. The diagnosis is confirmed when an individual meets four of the six Netchine-Harbison clinical criteria and has genetic testing results consistent with hypomethylation on chromosome 11p15.5 or maternal uniparental disomy (UPD) for

chromosome 7. Of note, approximately 40% of individuals who meet the NH-CSS clinical criteria may have negative molecular and/or cytogenetic testing.

### Bibliography

1. H. K. Silver, W. Kiyasy, J. George, W. C. Deamer. Syndrome of congenital hemihypertrophy, shortness of stature, and elevated urinary gonadotropins. *Pediatrics*, Evanston, Illinois, 1953, 12: 368-375.
2. A. Russell. A syndrome of "intra-uterine" dwarfism recognizable at birth with cranio-facial dysostosis, disproportionately short arms and other anomalies (5 examples). *Proceedings of the Royal Society of Medicine*, London, 1954, 47: 1040-1044.

## PINCER GRASP – JOURNAL SCAN

**Dr. Angela David**

Developmental Paediatrician, DCH, DNB, MRCPCH

Fellowship in Developmental Paediatrics(IAP)

Director, New Beginnings Early Intervention Centre for Children

Consultant, Cloud 9, OAR, Bangalore

**Title: Clinical assessment, investigation, diagnosis and initial management of cerebral visual impairment: a consensus practice guide**

**Authors:** Rachel Fiona Pilling, Louise Allen, Richard Bowman, John Ravenscroft, Kathryn J Saunders, Cathy Williams

**Journal:** Eye (<https://www.nature.com/eye>)

**Date of Publication:** 18 October, 2022

**Citation:** Pilling RF, Allen L, Bowman R, Ravenscroft J, Saunders KJ, Williams C. Clinical assessment, investigation, diagnosis and initial management of cerebral visual impairment: a consensus practice guide. *Eye (Lond)*. 2023 Jul;37(10):1958-1965. doi: 10.1038/s41433-022-02261-6. Epub 2022 Oct 18. PMID: 36258009; PMCID: PMC10333179

This review article highlights the current understanding and clinical practices for diagnosing and managing cerebral visual impairment (CVI) in the UK. Many professionals, including ophthalmologists, have a limited understanding of CVI, and few are adequately trained to identify this condition and implement a comprehensive management plan. CVI can arise from a variety of neurological issues and may even be

observed in typically developing children who experience academic challenges.

The article aims to clarify the diagnostic process for ophthalmologists, outlining how to accurately report CVI and recommending strategies for supporting affected children. Unlike visual impairments caused by ocular conditions, CVI's visual difficulties are not attributable to any eye pathology. Diagnosis relies on observing visual behaviors and documenting specific areas of visual challenges. Since CVI is assessed clinically, the article delineates the criteria necessary for its diagnosis and emphasizes the need for individualized testing to thoroughly understand each child's visual difficulties, alongside regular vision assessments. Therefore, testing should remain flexible and adaptable to the child's developmental level.

The tables included in the article serve as quick reference tools, detailing approaches to CVI, diagnostic criteria, and different types of visual dysfunction associated with the condition. CVI represents the most prevalent registrable vision impairment in the UK and other developed countries, yet its scope is poorly understood in low- and middle-income countries (LMIC). With no existing cure for CVI, early diagnosis and strategic environmental adjustments are crucial in mitigating the effects of visual dysfunction.

Moreover, efforts should be made to establish protocols and pathways for diagnosing CVI in children, facilitating improvements in their quality of life through simple adaptations.

**Title: Nutrition Interventions for Children with Cerebral Palsy in Low- and Middle-Income Countries: A Scoping Review**

**Authors:** Israt Jahan, Risad Sultana , Mohammad Muhit , Delwar Akbar , Tasneem Karim , Mahmudul Hassan Al Imam , Manik Chandra Das , Hayley Smithers-Sheedy , Sarah McIntyre , Nadia Badawi , Gulam Khandaker

**Journal:** *Nutrients* 2022 14(6) (<https://www.mdpi.com/2072-6643/14/6/1211>)

**Date of Publication:** 12 March, 2022

**Citation:** Jahan I, Sultana R, Muhit M, Akbar D, Karim T, Al Imam MH, Das MC, Smithers-Sheedy H, McIntyre S, Badawi N, Khandaker G. Nutrition Interventions for Children with Cerebral Palsy in Low- and Middle-Income Countries: A Scoping Review. *Nutrients*. 2022 Mar 12;14(6):1211. doi: 10.3390/nu14061211. PMID: 35334869; PMCID: PMC8951851.

This scoping review gives an understanding of one of the most important but seldom looked at aspect in children with cerebral palsy. The nutritional status and the various problems that occur in CP children have direct impact on their quality of life and impact caregivers difficulties. However, there is very little information available especially in the Low and Middle Income Countries about nutritional interventions for children with CP.

## Objectives

This article was meant to understand what the available nutritional interventions in children with CP in LMIC are and the outcome of those interventions on the nutritional status of these children.

## Methodology

Relevant studies using key words were identified from two databases – PubMed and Scopus up to January 2022. In addition, Google Scholar was searched for additional articles or scientific guidelines. A protocol was developed using the PRISMA extension for scoping reviews and the available evidence was summarised. The data was charted using a priori template.

The inclusion criteria of the studies taken for the review were

- (i) Participants were children with CP
- (ii) Primarily anthropometric measurements were taken as outcome measures of nutritional status
- (iii) Articles followed analytical study design or were descriptive studies with a control group.

The exclusion criteria for the articles were

- (i) Studies conducted in High Income countries
- (ii) If data about children with CP could not be differentiated from data of children with other impairments
- (iii) Non Peer-reviewed articles were not taken for this review.

## Results

Of the 4885 citations, only 132 abstracts were reviewed following the title screening. Out of these, only 26 were selected for the full review, however 5 articles were not obtained



in full text and another 4 were identified from handsearching the references. 25 studies had met the inclusion criteria but 17 were removed as they did not meet the exclusion criteria. 8 studies between 2008 and 2019 were finally reviewed for data charting.

Study Characteristics included the country where the study was conducted and economic classification, setting, study design & period, Study participants and the characteristics of the participating children with CP.

- i. Five of the eight were experimental studies, two were descriptive analytical studies and one was a qualitative study. All the eight studies were conducted in Middle income countries and none in the Low Income studies.
- ii. Six of these were done in hospital/ clinic/ institution-based setting and 2 were conducted in community-based settings in Ghana where the impact of the same intervention model was studied on different outcome measures.
- iii. Five studies had children with CP and their primary caregivers as participants and three had only children with quadriplegic CP. A total of 252 children between the ages of 1 year and 18 years 7 months were included. Among the children studied, 23 had GMFCS level I – II and 175 children had GMFCS level III – V.
- iv. The lowest sample size was 13 and the largest was 64 which was a community based study.
- v. 6 Studies had single type intervention like parent training (n=4) or surgical intervention (n=2) and 2 had multiple interventions. Dietary modification was an intervention component in 5 studies. The studies that had surgical intervention as outcome measures were both descriptive analytical studies from Brazil

and Mexico. The studies that involved parent/ caregiver training covered a range of content from therapy, feeding skills, dietary modifications, position and carrying. The number of parent sessions varied in every study and the follow-up duration ranged from 1 to 18 months. Only one study from South Africa documented the study implementation team involving a multi-disciplinary team.

### Outcome measures

- i. The most common anthropometric measurements used were weight (n=8), length/ height (n=7), MUAC (n=7), skin-fold thickness (n=4), that were compared to either, national standards, general population or WHO reference population.
- ii. 7 articles had other outcome measures along with nutritional assessment. Any adverse outcomes were reported in 3 studies that mainly included infection, chest health and mortality.
- iii. Of the 8 studies, 7 included follow-up data of participating children, whereas one study compared between two groups (intervention and control group). 4 out of these 7 showed improvement in nutritional status following intervention, one did not show any improvement and 2 showed deterioration.

### Discussion

This review highlights a significant gap in research concerning nutritional interventions, particularly in lower-income countries, which likely house the majority of malnutrition cases related to cerebral palsy (CP). The inclusion of studies from middle-income rather than low-income countries indicates a prevailing inequity in research focus, as most studies to date have predominantly been conducted in high-income countries. The findings suggest that dietary modifications yielded the most

positive outcomes for children with CP. While surgical interventions demonstrated some effectiveness, behavioral strategies aimed at improving feeding skills showed no significant benefits. Many of the studies reviewed were conducted in institutional settings, which limits their applicability, as many children in LMICs lack access to rehabilitation services and health care providers. Consequently, community-based strategies that focus on enhancing the skills of mid-level health service providers for growth monitoring, early detection, various interventions, and referral systems are crucial to prevent and treat malnutrition in LMICs.

Despite the valuable insights provided by the studies included in this review, their small sample sizes hinder the strength and generalisation of the findings. The focus on children with severe forms of CP, who are more likely to access institutional care, also leaves a gap in understanding the nutritional needs of those with milder forms of the condition.

Moreover, this review encountered other limitations. The data were predominantly sourced from just two databases, and the studies were selected based on specific keywords identified by the authors, which further restricted the initial pool of articles. The assessment of risk of bias and the quality of evidence within the articles was not conducted. Additionally, the authors could only analyze a limited number of common variables and could not report on other significant characteristics due to inconsistencies in reporting formats.

Nevertheless, this review is among the first to explore nutritional interventions for children with CP and emphasizes the critical lack of evidence and knowledge in this area for LMICs. It is essential for national and international stakeholders to prioritize future research to gather robust evidence that can guide best practices and optimize the use of limited resources.

## FROM GENERAL TO JOURNAL

## ANXIETY

Dr Manoj Bhatawdekar

IAP Handbook of Developmental and Behavioral Pediatrics

Anxiety is defined as a fearful anticipation of future in the absence of any real danger.

It is a state of the body, which is caused by a rush of stress hormones such as adrenaline, and is characterised by autonomic arousal and hypervigilance.

Anxiety needs medical attention if it interferes with daily functioning.

Children and adolescents can also experience anxiety at different stages of their life.

Anxious parents beget anxious children in a complex interplay between genetics and environment.

It is important to recognise anxiety disorders during childhood and manage them well.

Five different cases of anxiety are presented

Case 1 : Separation anxiety in a 9 year old girl with school refusal

Case 2 : Phobia of dogs in a 6 year old boy

Case 3 : 10 year old girl with social anxiety disorder

Case 4 : Panic disorder in 16 years old girl

Case 5 : Generalised Anxiety Disorder in a 17 year old boy

**Management**

Anxiety disorders are generally chronic conditions and can affect quality of life.

Timely referral to psychiatrist is needed.

Treatment is a combination of medications, psychotherapy and relaxation techniques.

Children less than 12 years can be prescribed imipramine or nortryptilline

Children above 12 years can be given SSRI

Parental counselling is important

Synopsis by Dr Anjali Gokarn.

## INTERESTING CASES

# A CASE OF WARBURG MICRO SYNDROME WITH NOVEL MUTATION OF RAB3GAP1 GENE

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MBBS, DCH, FIAP Developmental and behavioural Pediatrician.  
Rainbow CDC, Ananthapuri Hospital and Research Institute,  
Thiruvananthapuram, Kerala

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MBBS, DNB Resident, Department of Paediatrics, Ananthapuri Hospital and  
Research Institute, Thiruvananthapuram, Kerala

### INTRODUCTION

Warburg micro syndrome is a rare but severe disorder of autosomal recessive inheritance [1]. The syndrome, which has been described in about 144 families worldwide, is characterized by developmental delay, severe mental retardation, cerebral atrophy, hypogonadism, cryptorchidism, micropenis, ocular abnormalities and epilepsy. Ophthalmological manifestations include microphthalmia, microcornea, congenital cataract and ptosis. We report a case of a 1 year 6 months old boy from Maldives with Warburg micro syndrome. He has homozygous mutation of RAB3GAP1 gene, a gene very important for brain and ocular development.

### CLINICAL REPORT

The child first presented to the ophthalmologist [3] and was brought to us for fitness for cataract surgery at 4 months of age. At presentation, the child had not attained head control. He was born at term (38 weeks of gestation) as the second child of non-consanguineous marriage with a birth

weight of 2.3 kg (SGA, LBW). Unfortunately, his birth length and head circumference documents were not available. Antenatal and immediate postnatal period were uneventful. Newborn screening by DBS TMS showed G6PD deficiency.

On eliciting detailed history, his elder sister was found to have died at 8 years of age and she had similar features as that of the patient. His maternal aunt's daughter who is 4 years old now has microcephaly. She has, short stature and mild speech delay with normal development in other domains.

At presentation, at 4 months of age, he had failure to thrive and global developmental delay. Monitoring on follow up visits showed microcephaly and dolichocephaly. Head circumference at 2 years of age is 44 cm (less than 3rd centile, Z score less than -3 SD) and he has severe wasting and stunting.

On clinical examination, the child had hypertonia, scissoring of legs, dystonic and opisthotonic posturing. He also had hypereflexia and ankle clonus.



The child had no head control even at the age of 1 year 6 months. He occasionally responds to name call and has not attained any language milestones.

His ophthalmological findings included deep-set eyes, microphthalmia, microcornea and congenital cataract. Cataract surgery was performed at the age of 4 months and subsequent intra ocular lens implantation was not done because of severe microphthalmia. Now, the child has bilateral aphakia.

He also had bilateral cryptorchidism and micropenis (stretched penile length of 2.5 cm).

There was an extracardiac shadow visualized in the ECHO. Echocardiogram was otherwise normal. CT chest was taken to rule out any pulmonary pathology and it showed no intrathoracic abnormalities.

TORCH screen was done to rule out antenatal infectious etiology.

Neurological work up was done. MRI Brain showed periventricular gliosis in bilateral parietal lobes, irregular ventricular margins and thinning of body and splenium of corpus callosum. EEG was normal.

Bilateral cataract extraction was done at 4 months of age and the child has bilateral aphakia now.

At 2 years of age, he developed multiple episodes of seizures, all of them were generalized tonic clonic. He had status epilepticus and he was mechanically ventilated for 4 days at a private hospital in Male, Maldives. He is currently on multiple anti epileptic drugs.

Genetic testing was advised for the patient and the parents. Clinical exome was done and it reported a novel pathogenic homozygous mutation of RAB3GAP1 gene. He was also

found to have a hemizygotic pathogenic mutation in the G6PD gene associated with G6PD deficiency, which is unrelated to the phenotype of this syndrome.

#### DISCUSSION

Warburg micro syndrome is a very rare disorder. The syndrome is most commonly found within the Muslim community, with a higher occurrence in males and often involving consanguineous marriages, as in the case of our patient. Warburg initially identified it in 1993, in three children from a family with a history of inbreeding.

It is of autosomal recessive inheritance due to mutation in genes RAB3GAP1, RAB3GAP2, RAB18 or TCB1D20. It has 4 types based on the genetic defect, which are clinically indistinguishable from each other. Hence, genetic testing of the parents and genetic counseling is very important, especially since other family members had similar phenotype and the elder sibling of this patient with similar features died at the age of 8. Genetic testing was advised for both parents in order to offer genetic counseling.

Other diseases with similar features include Martsolf syndrome, cerebro-oculo-facial-skeletal syndrome, Cockayne syndrome, congenital cataracts-facial dysmorphism-neuropathy (CCFDN) syndrome. Martsolf syndrome is due to mutation in the RAB3GAP2 gene has many features of WMS, but is a less severe disease.

The children with WMS have profound motor and intellectual disability. They require multidisciplinary management. Currently, the child is under follow-up at our hospital under the Developmental Paediatrics wing of the Department of Paediatrics and is receiving limb physiotherapy and developmental therapy.

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## SUDDEN BURSTS OF LAUGHTER

Dr Leena Deshpande

### ‘Weigh’ your words !

Vedika , a bubbly and energetic, 7 year old has been my patient since infancy.

That evening she came with her mother with an upper respiratory tract infection.

Since she knows the routine , after I had examined her, she went to weigh herself on the weighing scale.

As her mother was lamenting on the fact that her weight is not increasing for the past year or two, we both heard a loud exclamation from Vedika.

She climbed down from the scale and said in a troubled voice ‘Oh no!! My weight has increased’.

Looking perplexed I said ‘ That’s good, why are you so upset ?’

and she goes ‘But mom gets up on our weighing scale at home every day and then she goes “Oh no! I’ve gained weight” . So I thought it’s bad to gain weight.’

As her mother sat there with a sheepish grin, I couldn’t stop laughing.

Shared by -

**Dr Priya Jain**

Developmental Pediatrician

IP Apollo hospitals, N Delhi.





## ROLLING OVER – THE OTHER SIDE - NEWS THAT IS PATH BREAKING

# ENDEAVOR RX- THE FDA APPROVED VIDEOGAME IN ADHD MANAGEMENT

Sreetama Chowdhury



Endeavor Rx is the first of its kind video game approved by FDA for management of ADHD in children between 8-17 years of age. It is primarily directed as a complementary management alongside pharmacological therapy for inattentive and combined type ADHD.

Developed by Akili Interactive group, Endeavor Rx has showed to improve scores in selective and sustained attention, tested by Test of Variables of Attention (TOVA) in about 600 children, but has showed minimal or no alteration in behavioral symptoms like hyperactivity. Treatment related side-effects include headaches, dizziness, nausea and aggression in around 1 % of tested children, with no reported Serious Adverse Events. Contraindications for use include photosensitive epilepsy, colour blindness and comorbid locomotor issues restricting video game usage. The science behind the game is hypothesized to be cognitive retraining , focusing on challenging tasks designed to impact the attention of children with ADHD.

The prescription for the videogame, which is available on both android and iOS platforms, should only be from a licensed medical provider in the US. The prescribed usage duration should be for around 25 minutes a day, 5 days a week for 4-8 weeks.

### Further reading:

1. Kollins SH, DeLoss DJ, Cañadas E, Lutz J, Findling RL, Keefe RSE, Epstein JN, Cutler AJ, Faraone SV. A novel digital intervention for actively reducing severity of paediatric ADHD (STARS-ADHD): a randomised controlled trial. *Lancet Digit Health*. 2020 Apr;2(4):e168-e178. doi: 10.1016/S2589-7500(20)30017-0. Epub 2020 Feb 24. PMID: 33334505.
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**Membership Form**



Indian Academy of Pediatrics



**Chapter of Neuro Developmental Pediatrics**

**Membership Application Form**

(Please fill in capital letters; All Information Mandatory; Pl do not leave any blank spaces)

1. Surname: \_\_\_\_\_ First Name: \_\_\_\_\_ Middle Name: \_\_\_\_\_
2. Date of Birth \_\_\_\_\_
3. Central IAP Membership Number ( For Pediatricians Only) : \_\_\_\_\_
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- .....
- .....
5. Office Address.....
- .....
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6. Email:..... Landline Telephone:.....
7. Mobile Phone Number (1).....(2).....
8. Present Work Status: Private \_\_\_ Govt. \_\_\_ Medical College \_\_\_ Voluntary Agency \_\_\_
- 9.

Qualifications	Name of University	Year of Passing
MBBS		
MD Pediatrics		
DCH		
DNB Pediatrics		
Others		

10. Areas of Interest of Work \_\_\_\_\_

P.T.O

**Membership Form**

11. Membership Subscription:

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 ACCOUNT NUMBER 16860100040046  
 IFSC CODE – FDRL0001686**

**Signature of the Applicant with date:**

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**East Zone: Dr Atanu Bhadra**

**West Zone : Dr Leena Deshpande**

**Central Zone :Dr Deepak Dwivedi**

**South Zone : Dr Deepa Bhaskaran**

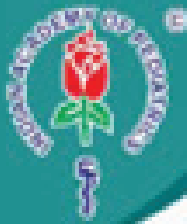
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	Dr Pratibha Singhi	Dr Nandini Mundkur
2002-2004	Dr Nandini Mundkur	Dr Abraham K Paul
2004-2006	Dr Hanumantha Rao	Dr Jacob Roy
2006-2010	Dr Abraham K Paul	Dr SS Kamath
2010-2013	Dr SS Kamath	Dr Samir H Dalwai
2013-2015	Dr Samir H Dalwai	Dr Prameela Joji
2015-2017	Dr Samir H Dalwai	Dr Chhaya S Prasad
2017-2019	Dr Jeeson C Unni	Dr Leena Srivastava
2019-2023	Dr Shabina Ahmed	Dr KS Multani
2024	Dr Leena Srivastava	Dr Shambhavi Seth

## NATIONAL CONFERENCES OF THE CHAPTER

SI No	Year	Place	Organizing Chairpersons
1	2004	Bhubaneswar	Dr J Sarangi, Dr Arabindo Mohanty
2	2005	Hyderabad	Dr Hanumantha Rao
3	2006	Cochin	Dr Abraham K Paul, Dr S S Kamath
4	2007	Bangalore	Dr Nandini Mundkur
5	2008	Meerut	Dr Priyanka Jain
6	2009	Mumbai	Dr Tanmay Amladi, Dr. Samir Dalwai
7	2010	Delhi	Dr Monica Juneja
8	2011	Chandigarh	Dr Chhaya Prasad
9	2012	Nagpur	Dr Deepti Jain
10	2013	Cochin	Dr Abraham K Paul, Dr SS Kamath
11	2014	Bhopal	Dr Zafar Meenai
12	2015	Madurai	Dr Santhosh Rajagopal
13	2016	Mumbai	Dr Samir Dalwai
14	2017	New Delhi	Dr H Pemde, Dr Shambhavi Seth
15	2018	Hyderabad	Dr Himabindu Singh
16	2019	Pune	Dr Leena Srivastava
17	2020	eNCDP	Dr KS Multani
18	2021	eNCDP 2.0	Dr KS Multani
19	2022	Kolkata	Dr Atanu Bhadra
20	2023	Guwahati	Dr Shabina Ahmed
21	2024	Bangalore	Dr Adarsh E



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