



COMHAD



Children with disabilities
have abilities too.

NATIONAL CONFERENCE OF COMMONWEALTH ASSOCIATION FOR HEALTH & DISABILITY KOLHAPUR-INDIA 2019

Theme : Through Adversities to the Stars

Organized by

COMHAD India Chapter, Dept. of Pediatrics, D. Y. Patil Medical College, Kolhapur
in Association with Kolhapur Academy of Pediatrics

Date: 23rd & 24th November 2019

Venue

Conference Hall, D. Y. Patil Medical College,
Kasaba Bawada, Kolhapur



Best Wishes

from

KOLHAPUR DISTRICT CHEMIST ASSOCIATION



Bhartesh Kalantre



Bhujingrao
Bhandwale



Avinash Mane



Madan Patil



Mohan Dhere



Dattatray Patil



Dhawal Bharwada



Kiran Dalvi



Nandkumar Patil



Kiran Jadhav



Ashok Borgave

नूतन स्विकृत संचालक २०१९-२०१४



रविंद्र पाटील



विश्वास कामिरे



दाजीबा पाटील



गुरुप्रसाद जाधव



अमरसिंह शिंदे



शिवाजी यादव



आशा पाटील



सुशिला पाटील

Organizing Committee

Our Inspiration

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Dr. Uday Bodhankar

Dr. Mrudula Phadke

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Mr. Satej D. Patil

Dr. S.V. Deodhar

Dr. Yeshwant Patil

Dr. K. Jayoji Rao

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MESSAGE FOR COMHAD PEDIATRICS CONFERENCE NOV 2019



Hon'ble Dr. Sanjay D. Patil

Chancellor, D.Y. Patil Education Society (Deemed University), Kolhapur &
President, D.Y. Patil Education Society, Kolhapur

I am happy to learn that the Department of Paediatrics is organising “National Conference of Commonwealth Association for Health and Disability, India-2019” on 23rd & 24th November, 2019.

Over the past many years D.Y. Patil Medical College under D.Y. Patil Education Society Deemed University has grown up enormously with new and innovative developments carrying the institute as one of the leading academic medical centre.

The Institution and indeed the D.Y. Patil Group is committed not only to the cause of education & healthcare but also to the principles of equality, empathy and justice enshrined in the principles of Human Rights. This Conference will be an important step in this direction.

I extend my warm regards to all the renowned speakers, delegates from all over the country. I congratulate the Organizing Committee, Department of Pediatrics for organizing this Conference and wish them all the Best!

MESSAGE FROM AG. VICE-CHANCELLOR



Prof. (Dr). Shimpa R. Sharma

M.D.(Medicine)

Ag.Vice-Chancellor

I congratulate the Organizing Team, Department of Pediatrics for organizing the “National Conference of Commonwealth Association for Health and Disability, India-2019”. I commend them for choosing a dynamic topic of recently renewed interest that begs attention and updating.

Knowledge is a flow, a continuous growth, based on new experiences and new research. The conference theme highlights the need for inclusion beyond the pedantic. The lectures and guidance from eminent speakers will assuredly provide new perspectives and open

new frontiers in the efforts to bring the hitherto neglected sections of society at par with the majority.

The organizers have left no stone unturned to ensure that all attending this conference have a complete experience. Delegates to this conference shall definitely leave intellectually nourished and gastronomically fulfilled.

Once again, I congratulate Dr.A.B.Kurane, Professor & Head, Department of Pediatrics and his team for the efforts taken and wish them the very best!

MESSAGE FROM REGISTRAR



Dr. V. V. Bhosale

Registrar, D Y Patil Education Society

Dear All,

D. Y. Patil Education Society (Institution Deemed to be University), Kolhapur is a university declared under section 3 of the UGC Act 1956. The Higher Education institutions, which are doing work of high standard in specialized academic fields comparable to a university are declared as Deemed to be University by MHRD, Government of India. To continue to fulfil this expectation, our university is always at the forefront to promote the research activities resulting good number of publications. We always promote our constituent units and departments to arrange conferences and seminars, so as to upgrade the depth of knowledge and create new innovative areas of research. In series of such activities, the department of Pediatrics has organized the national conference on the theme 'Through Adversities to the Stars'. The university supported by providing financial assistance for this activity. Best wishes to the organizers!

On behalf of our university, I welcome faculties, experts and participants.

Dr. V. V. Bhosale

Registrar

MESSAGE FOR COMHAD PEDIATRICS CONFERENCE NOV 2019



Hon'ble Satej D. Patil

Vice-President, D.Y.Patil Education Society, Kolhapur
MLC, Maharashtra State



SATEJ alias BUNTY D. PATIL (M.L.C.)

Ex. State Home Minister, Maharashtra State

Date: 16/11/2019

MESSAGE


It gives me immense pleasure that the 'National conference of common health association for health and disability, India- 2019' has been organized during 22nd and 24th November 2019 at D. Y. Patil Medical College, Kasaba Bawada, Kolhapur in association with Kolhapur Academy of pediatrics.

This conference is more focusing on special children. So participant doctors who are involved in the care of special children can update their knowledge.

I extend my best wishes for the success of this conference and the outcome of this conference would help the special children to achieve their maximum potential..

Thanking you,

Yours faithfully,


Satej (Bunty) D. Patil

WELCOME MESSAGE FROM THE EXECUTIVE DIRECTOR – COMHAD, INTERNATIONAL



Dr. Uday Bodhankar

MD, DCH, FIAP, FNNE, FRCPCH.

Executive Director- Commonwealth Association for Health & Disability

Deputy Chairperson –CHPA UK

Adjunct Associate professor Pediatrics –Sydney University

International Council Member – ASPR-Japan

Nodal officer –RCPCH –DCH –UK

ubodhankar@gmail.com

It is a matter of great pride and privilege for me to welcome you all for this unique “National Conference of COMHAD “ at D.Y.Patil Medical College, Kolhapur-India , scheduled from 22nd to 24th November 2019 with the theme “Through adversities to the Stars”.

Globally, about 200 million children do not reach their developmental potential in the first five years because of poverty, poor health, nutrition and lack of early stimulation. The WHO estimates that 15-20% of children worldwide have disabilities; 85% are in developing countries.

The optimal development of the child must be ensured during the early years by avoiding – as much as possible – perinatal, genetic, metabolic and environmental risk factors. The most common forms were: developmental delay (69.3%), speech delay (14.3%), global delay (5.7%), gross motor delay (5.3%) and hearing impairment (3.6%)

Universal screening should lead to early detection and timely intervention of medical conditions, ultimately leading to a reduction in mortality, morbidity and lifelong disability. The dividends of early intervention would be huge, including improvement of survival, reduction of malnutrition, enhancement of cognitive development, educational attainment, and overall improvement of quality of life of our children.

The academic dream project of respected Prof. Mrudula Phadke madam of releasing in depth COMHAD Bulletin cum souvenir from experts related to all aspects of childhood challenges need to be complimented along with efficient editorial committee members.

I must congratulate the enthusiastic organizing team of experts working hard for the success of this mega academic event with the blessings of Padmashree Dr.D.Y. Patil , the guidance of Honorable Dr. Sanjay D. Patil , Mr. Satej D. Patil , Dr. Deodhar and able dynamic leadership of Dr Kurane, Dr. Sanghavi , Dr. Mohan Patil, Dr. Nivedita Patil. I must recognize the special efforts of organizing secretary Dr. Ramesh Nigade and Dr. Ashok Chougule along with all Patrons, National V.P., Treasurers, Members of KAP and other organizing & scientific committee members for making the event grand academic success.

I will fail in my duty if I do not thank my respected teachers , advisors , EBM of last two decades of my journey in COMHAD from late founder Dr. Pandurangi , Prof. Pagdala , Prof. Sirajul Islam, Prof. Phadke Madam ,Dr. Rawat sir, Dr. Yashwant Patil ,Dr. Jayojirao, Prof. Mallikarjun and Dr. Vasant Khalatkar for their wise counseling and timely assistance in fulfilling our mission of global welfare of specially challenged children.

Our driving vision is of an inclusive world in which the challenged are all able to live a life of health, comfort, and dignity.

We invite you to help this vision become a reality, to achieve our “MISSION ABILITY FROM DISABILITY”.

With Regards and Best wishes.

WELCOME MESSAGE FROM THE INTERNATIONAL PRESIDENT – COMHAD, INTERNATIONAL



Dr. Yeshwant Patil

M.D. (Ped.), D.CH, FIAP, FICMCH
National Secretary Community Pediatrics Chapter IAP
Tutor for IPPC/DCH Sydney Uni/MUHS
Former Professor in Pediatrics DMIMS Nagpur
National Executive Board Member IAP 2002 to 2011
State President – MS Chapter of NNF 2007 to 2009
State President – IAP Maharashtra 2000
dryashwantpatil@gmail.com

Dear Esteemed Delegates,

It is a great pleasure to welcome you all for this unique National Conference of COMHAD at Kolhapur, India, from 23rd to 24th November 2019 with preconference workshop on 22nd November 2019.

The theme selected is very special for the specially challenged people.

“THROUGH DIVERSITIES TO THE STARS”

It has originated from the popular Latin phrase “Per ardua ad astra” meaning “through hardships / struggle to the stars”. Figuratively it means, "Greatness is only achieved by surmounting problems". 'Per ardua ad astra' dates from 1912 and was an official motto of the Royal Air Force and other Commonwealth air forces including Royal Indian Air Force until 1947.

About 80% of disabled people in developing countries live in poverty. In India 2.2 % population has a disability, a humbling figure of more than 27 million people. More than half of people cannot afford to access to health services for their health care. They are also more likely to experience barriers when accessing health facilities, information and equipment.

To fulfill the aim of the theme of conference, we as an individual, NGOs and society should come forward along with the Government to help these specially challenged to overcome their adversities and should try to unlock their potential by giving them fair chance to work in the society depending on their readiness, willingness and ability to work in the field of their choice. They should be empowered by assuring them that their differences are actually assets for the organization and society.

Government of India, after Digital India, Clean India and Skill India, is all set to launch the 'Accessible India Campaign' which will focus on making India a disabled-friendly country. The programme will focus on grievances of people with disabilities and the problems they face, so as to find solutions to rectify and empower them in their field of choice.

My accolades and congratulations to the enthusiastic organizing team from Kolhapur who worked hard for the grand success of this conference, under the able guidance of the Organizing Chairpersons Dr. A.B. Kurane, Prof. & Head Pediatric Dept. D.Y. Patil Medical College, Dr. Prakash Sanghavi, Vice President COMHAD UK (Asia), and Dr. Vasant Khalatkar, President COMHAD India Chapter and most sincere and efficient Chief Organizing Secretary Dr. Ramesh Nigade and other team members and Scientific Committee members.

I wish the conference a great success and hope the scientific deliberations will tackle the issues of specially challenged for their betterment.

Wishing you all Merry Christmas and a Happy New Year 2020.

WELCOME MESSAGE FROM THE PRESIDENT – COMHAD, INDIA



Dr. Vasant Khalatkar

National President COMHAD

Dear Esteemed Delegates,

Wish you all Happy and prosperous New Year 2020 in advance!

On behalf of the National President COMHAD India, with a great sense of pride and privilege, I take this opportunity to invite you to the Holistic City of goddess Mahalaxmi Kolhapur, to attend this unique convention, National Conference of Commonwealth Association for Health and Disability (COMHAD) 2019, from 22th to 24th November 2019.

I am extremely thankful to the hardworking, trustworthy and sincere working force on forefront of COMHAD India, who has burnt their blood and sleep to make the event a memorable one and need to be complimented for their tireless efforts. Indeed we are indebted with their generous and friendly approach towards COMHAD.

Renowned expert who are acknowledged authorities in their respective fields are expected to attend this conference. The theme of the conference is “THROUGH ADVERSITIES TO THE STARS”. Considering the theme every effort is being made with the guidance provided by the seniors to make this conference a valuable learning experience academically, through excellent, unaffordable, happiness, confidence session; and a memorable one socially.

I am sure this Conference is going to give you all, an opportunity to share the knowledge and experience with eminent national and international faculties.

I will fail in my duty if I do not express my sincere thanks to our dynamic Executive Director of COMHAD (UK), Dr. Uday Bodhankar and Dr. Yashwant Patil (International President) for their blessing & valuable guidance in making this impossible mission to possible with immense support by staff of D. Y. Patil Medical college Kolhapur, Dr. Prakash Sanghvi, Dr. Ramesh Nigade, Dr. Mohan Patil, Dr. Kurane, Dr. Suhas Kulkarni, Dr. K. Jayoji Rao, Dr. R G Patil and all other Committee members of Organizing team.

I look forward to your active participation and assure that you will enjoy Kolhapur hospitality and carry home the sweet memories of the conference.

With warm regards and best wishes & hope to meet you all in new conference.

MESSAGE FROM ORGANIZING SECRETARY – COMHAD NATIONAL CONFERENCE 2019.



Dr. Ramesh Nigade

Organizing Secretary – COMHAD

It is my great pleasure and proud to welcome you all for this very special conference of COMHAD India Chapter 2019. This conference is special because the theme of conference is “Through Adversities to the Stars”. Special children are special for everybody and are part of our society. They are having special merit in different fields and their needs are also special. We as a part of society must understand this and give them multidisciplinary and comprehensive plan to achieve their maximum. We all must feel proud to be the part of this social cause and conference.

If we spread awareness about the various recent modalities of the treatment, facilities available with Government and NGO's, various laws and recent developments in this field to the specially challenged section of the society and people working for specially challenged section e.g. Doctors, Nurses, Paramedical staff, Physiotherapists, Occupational therapists & NGO's, then I think they can achieve their maximum & become stars.

COMHAD is an International organization under Commonwealth Foundation U.K., working in the field of health and disability. I am very happy to inform you that, in India COMHAD is working as COMHAD-INDIA CHAPTER under the able leadership of Dr Uday Bodhankar- Deputy chairman CHPA, Exe. Director COMHAD U.K and Ex International President COMHAD, Dr Yashwant Patil, International President COMHAD U.K and Dr Vasant Khalatkar, National President COMHAD – India. This year department of Pediatric, D.Y. Patil Medical College, Kolhapur and Kolhapur Academy of Pediatrics have privilege to arrange National conference of COMHAD INDIA chapter and I am proud of to be an organizing secretary of this conference of Nobel cause.

I thank all the office bearers of COMHAD International, National and all members. I also thank Dr Sanjay .D. Patil, chancellor and President D. Y. Patil Educational Society and all office bearers of D. Y. Patil Medical college and university, Dr S.V. Devdhar Hon. President Kolhapur Association of Pediatrics, Dr Anil Kurane HOD Department of pediatrics, all pediatric department colleagues, sponsors, post graduate students, my wife Mrs. Sneha and my family members for helping me a lot to arrange this conference.

FROM THE DESK OF ORGANIZING CHAIR PERSON



Dr. Anil Kurane

HOD, Paediatric Department, D. Y. Patil Medical College

So many of our dreams at first seem impossible, then they seem improbable, and then, when we summon them they will soon become inevitable" said Christopher Reeve. The human spirit is one of ability, perseverance and courage and no disability can steal it away. It is my pleasure and privilege to welcome all the delegates, faculty and the distinguished guests to the National conference COMHAD India Chapter 2019. COMHAD

is an international organization under Commonwealth Foundation UK, working in the field of Health and Disability. This year Department of Pediatrics, D Y Patil Medical college, Kolhapur in association with Kolhapur Academy of Pediatrics is hosting the National conference of COMHAD India Chapter which will be conducted on 23rd and 24 November 2013 at Kolhapur. Special children are part of our society just like you and me. But blinded by all the materialistic needs for the inner satisfaction, society often fails to give attention to these kids who require more than any other thing. We are fortunate as Healers of children, we can help them through this. We can provide opportunities to help them achieve their fullest potential. It is our responsibility to spread awareness about the Prevention of disability, different modalities of treatment available and their rights. Let us take them "Through Adversities to the Stars" and that is the theme of the conference. DY Patil education society Kolhapur is a reputed 35-year old organization. DY Patil Medical college Kolhapur was started in 1989. MHRD accorded the Deemed to be University status to DY Patil education society in Sept 2005. The university has been I NAALIM in 2017 under the able guidance of Chancellor and President Dr Sanjay D Patil. I thank Dr Sanjay D Patil, AG Vice chancellor Dr Shimpa Sharma and Dean Dr R K Sharma for supporting this noble cause and for extending all the required guidance in conducting this conference. On behalf of Department of Pediatrics, I, Dr Anil Kurane, take the privilege to thank the members of the COMHAD India Chapter for giving us opportunity to host this prestigious conference at DY Patil Medical college, Kolhapur and for giving me an opportunity to head this conference as an Organizing Chairperson. Also, I thank Deputy Chairman CHPA and executive Director COMHAD UK Dr Uday Bodhankar, COMHAD international President Dr Yashwant Patil, COMHAD India President Dr Vasant Khalatkar, for their valuable inputs and cooperation. I hereby welcome you all for the COMAD 2019 and I assure you of a good Academic feast and warm hospitality of Kolhapur.

WELCOME MESSAGE FROM THE PRESIDENT – COMHAD, INDIA



Dr. Prakash Sanghavi

Vice President COMHAD International (Asia)
Organizing Chairman COMHAD National conference
President – COMHAD India

It is a proud moment and privilege for me to welcome you all for such an important National conference COMHAD at Kolhapur on 23rd and 24th November 2019. Disability is a perception, we can see it the way we want and strive hard to achieve whatever we want. Most important are Perinatal, Genetic, Metabolic and

Environmental risk factors and prevention is the best form of approach like Vaccination, treatment burden is huge. Govt of India has taken excellent initiative in the form of 4D project to provide better care at District level for all types of disabilities. A lot more needs to be done in this field.

I appeal to millions of our young graduates to put some heartfelt support to prevent and heal the disabilities. This is God's work n we all should contribute in this. I am highly grateful to Dr. Uday Bodhankar, Executive President COMHAD International being my mentor and motivator in this journey. Under his able guidance we should increase COMHAD network in various Asian countries. I am also indebted to Prof Mrudula phadhke for her blessings and Dr Yashwant Patil our COMHAD International President. My sincere thanks to My beloved friend and Organizing secretary Dr Ramesh Nigade who worked tirelessly to make this conference a grand success. My sincere thanks to Dr. Vasant Khalatar COMHAD National President Dr. K.K Jayoi Rao, Dr. Anil Kurane, Prof. and HOD Pediatrics DY Patil Medical College Kolhapur and the whole team of DYP and Dr. Sudhir Deodhar, Executive President KAP, Dr. Deepa Phirke for their contribution for this Convention

Once again i appeal to all my colleagues and friends to increase membership of COMHAD across the Asia and Globe

MESSAGE FROM CHIEF PATRON COMHAD UK



Prof. Md. Sirajul Islam

MBBS, FCPS (paed), PhD
Chief Patron, COMHAD

This is a matter of great pleasure that the Commonwealth Association for Health and Disability (COMHAD) is continuing to serve children and people with mental and physical limitations for a long time. It has done very appreciable work to raise mass awareness about the consequences of birth trauma and thus conducted training on essential newborn care to unskilled birth attendants and also conducted research on resuscitation of asphyxiated newborns at the grassroots

level.. COMHAD now has expanded to a great extent and is holding scientific meetings in different parts of the subcontinent. The new able leadership of COMHAD is doing everything possible to highlight the problems of the disabled children and people in the Commonwealth and thus give utmost importance to safe delivery.

I wish every success of Kolhapur, Maharashtra COMHAD conference.

FROM THE EDITORIAL BOARD.



Dr. Ajay Shinde
Chief Editor Souvenir

It was great pleasure for us to design and produce before you COMHAD National Conference on childhood disability souvenir, I am happy with the response and the enthusiasm shown by the participants.

We thank the organising committee for giving us this opportunity for designing the Souvenir. I thank all the contributors for the advertisements. Special thanks to the Marketing department of Dr. D.Y. Patil Medical College Kolhapur without whom it was not possible in time frame to complete the task.

We wish everyone enjoyable and knowledgeable experience.



Dr. Sudhir Deodhar
President
Kolhapur Paediatric Association

we , paediatricians , neonetologists ,child psychologists with the help of orthopedic surgeons , ent , physiotherapists and all those who are interested in child welfare are now ready to learn the concept of using artificial intelligence to minimise the disability and to get the maximum recovery from disability . this is the aim of our "comhad " national conference



ABSTRACTS

ROLE OF NUTRITION IN NEURODEVELOPMENTAL DISORDERS



Dr. (Mrs.) M.A. Phadke

Sr. Advisor, NHM, Govt. of Maharashtra &
UNICEF and Former Vice-Chancellor, MUHS

Nutrition plays key role in health & neurodevelopment of a child. It is also a major factor in the genesis of various nervous system diseases of childhood. Broadly, these include cerebral palsy, mental subnormality, inborn errors of metabolism, chromosomal disorders, autism, toxic, traumatic conditions and the most important are iodine, iron and other nutritional deficiencies. These children are called as 'Divyang'.

Adequate nutrition is necessary for cognitive, motor and socioemotional skills throughout childhood. There are 3 windows of opportunities for nutrition interventions.

1) Adolescence

2) At conception

3) '1000 days' that include period from conception to two years after birth. During these 1000 days, genetic blueprint is determined first at fertilization. After that, it is influenced by nurture and experience, interaction between genes and environment. Various epigenetic, cellular, metabolic & physiological factors, DNA methylation play a role. In addition to genes, stimulation from outside is important for brain growth.

Brain development – At 22 days after fertilization, neural plate begins to fold inwards forming neural tube which later becomes brain and spinal cord. Folic acid, copper, vitamin A & B₁₂ are essential at this stage. At 42 days, nerve cells start forming by cell division forming neurons and glial cells. Neurons form at the rate of 250000 new cells every minute and at birth there are 100 billion neurons. At 60 days in utero, neurons start migrating to their place in the brain, start developing axons and dendrites, these branchings connect with each other forming synapses. Soon after this, starts 'synaptic pruning' i.e. elimination of neurons. It depends on experiences and environment. Normally, about half the neurons are eliminated over a period of first few years.

SAM (Severe acute malnutrition), Iron, Folic acid, Iodine, Zinc, Choline and B vitamin deficiencies result in disorders and neurodevelopmental delay.

Overall, protein energy deficiency results in decreased global brain development, Fats, Iodine are responsible for neuronal connectivity, Zinc & Iron are for memory & learning and Folic acid is required for neural tube formation. Deficiencies of both nutrition and environment i.e. nurturing, stimulation can have additive effect (eg in Protein deficiency), alternating effect (low birthwt.) or isolated effect (Zn & Choline).

Timing and degree of deficiency is important. Deficiency of folic acid during 22 days post conception results in Neural tube defect in the baby, while DHA (decosahexanoic acid) deficiency from 26 weeks to 1 yr after birth results in inadequate myelination of auditory pathways, spinal cord etc with neurodevelopmental delay. There is a threshold limit for every nutrient and sometimes recovery is only partial. This is true for iodine deficiency and to some extent iron deficiency.

Nutritional treatment for specific inborn errors of metabolism includes diet with decreased amounts of that specific amino acid. Correction of overall nutritional deficiencies by Iron, folic acid, zinc, B vitamins and proteins is crucial and are a component of many national programs.

Thus, there exist simple solutions for complex neurodevelopmental problems and many of our flagship national programmes are based on these. We should focus on three windows of opportunities for optimum nutrition in children and adults.

The prenatal microarray, NGS or NIPS (Non-Invasive Prenatal Screening) tests can now detect genetic abnormalities in the high-risk fetus and is the most beneficial when ultrasonography identifies structural anomalies or dysmorphism in the fetus. The various reproductive options can also be offered to the parents using latest genomic technologies when socioeconomic, cultural & ethnic diversity prevails. However, the precise genetic diagnosis is made by the experienced medical geneticist to arrive at the proper phenotype-genotype correlation and ascertain the precise genetic cause of the disability.

The different cases with ID, MCA, ASD, chromosomal or single gene disorders will be illustrated to emphasize the role of genetics & genomics in prevention of childhood disabilities. The successful use of genomics in prenatal diagnosis will be discussed with case presentations indicating its significant role in prevention of disabilities with genetic aetiology.

A.D.H.D. - ACADEMIC IMPACT



DR. SUCHIT TAMBOLI

M.B.B.S. D.C.H

Founder Director – Chiranjiv Clinic, Ahmednagar.

Attention-deficit/hyperactivity disorder (ADHD) is associated with poor grades, poor reading and math standardized test scores, and increased grade retention. ADHD is also associated with increased use of school-based services, increased rates of detention and expulsion, and ultimately with relatively low rates of high school graduation and postsecondary education. Children in community samples who show symptoms of inattention, hyperactivity, and impulsivity with or without formal diagnoses of ADHD also show poor academic and educational outcomes. Pharmacologic treatment and behavior management are associated with reduction of the core symptoms of ADHD and increased academic productivity, but not with improved standardized test scores or ultimate educational attainment.

At the level of body functions, ADHD affects several global and specific mental functions:

1. Intellectual function
2. Impulse control
3. Sustaining and shifting attention and memory
4. Control of psychomotor functions
5. Emotion regulation
6. Higher level cognition, including organization, time management, cognitive Flexibility, insight, judgment, and problem solving
7. Sequencing complex movements.

At the level of activities ADHD may result in limitations in at least 2 domains

1. Learning and applying knowledge, including reading, writing, and calculation
2. general tasks and demands, including completing single or multiple tasks, handling one's own behavior, and managing stress and frustration.

We must differentiate between academic underachievement, which refer to problems in learning and applying knowledge, including earning poor grades and low standardized test scores, and academic performance, which includes completing class work or homework.

Children with ADHD use more ancillary services, including tutoring, remedial pullout classes, after-school programs, and special accommodations.

Academic underachievement and poor educational outcomes associated with ADHD are persistent. Academic difficulties for children with ADHD begin early in life. Symptoms are commonly reported in children aged 3 to 6 years and preschool children with ADHD or symptoms of ADHD are more likely to be behind in basic academic readiness skills

Behavior Management of ADHD

Behavioral interventions for ADHD, including behavioral parent training, behavioral classroom interventions, positive reinforcement and response cost contingencies are effective in reducing core ADHD symptoms. It has been shown that behavior management is equivalent or better than medication in improving aspects of functioning, such as parent-child interactions and reduction in oppositional-defiant behavior.

Combined Management of ADHD

Given the chronic nature of ADHD and its impact on multiple domains of function, it is likely that multiple treatment approaches are needed. Combined treatment (medication and behavioral treatment) in the Multimodal Treatment The

multimodal treatment included academic assistance, organizational skills training, individual psychotherapy, and social skills training, and, if needed, reading remediation using phonics.

Educational Interventions and Services

Services include accommodations and related services in the general education setting, such as preferential seating, modified instructions, reduced classroom and homework assignments, and increased time or environmental modification for test taking. The advantage of universal design is that most children with ADHD are educated in general education settings. Improved universal design in the classroom could potentially benefit all children in the classroom, particularly those with ADHD.

School-based intervention approaches

Small Class Size

Small classes of approximately 8 to 15 students have been beneficial for younger children and children with special needs. Because children with ADHD are reported to do better with one-on-one instruction, smaller class size makes intuitive sense. Small class sizes will probably result in use of innovative educational approaches that are precluded in the current system.

Reducing Distractions

Classrooms are often noisy and distracting environments. Children perform more poorly in noisy situations than do adults. If an acoustic environment can be provided that allows +15 dB signal-to-noise ratios throughout the entire classroom, then all participants can hear well enough to receive the spoken message fully. Repetition of instructions alone is not likely to increase the attention of children with ADHD.

Specific Academic Intervention Strategies

Antecedent interventions Include choice making, peer tutoring, and computer-aided instruction. Such strategies are proactive, support appropriate adaptive behavior, and prevent unwanted, challenging behaviors. These strategies make tasks more stimulating and provide students with opportunities to make choices related to academic work. They may be particularly helpful for children with ADHD who demonstrate avoidance and escape behaviors.

Choice-making strategies allow students to select work from a teacher-developed menu. It has also decreased disruptive behavior in a general education setting, a related concept is project-based learning, which capitalizes on student interests and provides a dynamic, interactive way to learn.

Class Wide Peer Tutoring Peer tutoring reduces the demands on teachers to provide one-on-one instruction. At the same time, it gives students with ADHD the opportunity to practice and refine academic skills, as well as to enhance peer social interactions, promoting self-esteem. Peer tutoring may be particularly effective when students are using disruptive behavior to gain peer attention.

Computer-aided instruction has intuitive appeal as a universal design feature and for children with ADHD because of its interactive format, use of multiple sensory modalities, and ability to provide specific instructional objectives and immediate feedback. A game-format math program found increases in academic achievement and increased task engagement.

Increased Physical Activity: Increased use of recess and physical exercise might reduce over activity. Regular exercise showed reductions in disruptive behavior with greater effects in participants with hyperactivity.

Alternative Methods of Discipline The use of interventions that teach children how to replace disruptive behaviors with appropriate behaviors is less punitive than suspensions and more effective in promoting academic productivity and success.

Systems Change

Classroom changes are unlikely to create adequate improvements without concomitant changes in the educational system.

Three potential systems change are

1. Improved education of teachers and educational administrators
2. Enhanced collaborations among family members, school professionals, and health care professionals
3. Improved tracking of child outcomes.

At the policy level, we need mechanisms to track the outcome of children with ADHD in relation to educational reform and utilization of special services.

How can parents help?

Parenting skills training helps parents learn how to use a system of rewards and consequences to change a child's behavior. Parents are taught to give immediate and positive feedback for behaviors they want to encourage, and ignore or redirect behaviors they want to discourage. Parents are also encouraged to share a pleasant or relaxing activity with the child, to notice and point out what the child does well and to praise the child's strengths and abilities. They may also learn to structure situations in more positive ways.

Activities to help ADHD child at home

1. Make a schedule. Set specific times
2. Make simple house rules.
3. Make sure that the directions are understood.
4. Reward good behavior.
5. Make sure your child is supervised all the time.
6. Watch your child around his or her friend.
7. Set a homework routine
8. Focus on effort, not grades
9. Talk with your child's teachers.

DISABILITY? OR PHYSICALLY CHALLENGED! ---MEASURES TO MINIMIZE OCCURRENCE AND MAXIMIZE PREVENTION IN DIGITAL ERA



Prof. Rajaram Pagadala

Former Deputy Director General of Health Services, Govt of India
Chancellor SBV University

In a review article on a joint report of ICMR, PHF and the MOH &FW for the period 1990-2017 trends show that a bigger push is needed to achieve the goals for reduction in prevalence of stunting, underweight, low birth weight, Anemia etc. In children, if it has to be achieved by 2022 (Lancet 2018), National Nutrition Mission, suggests more stress is required for accelerating the programs. However, one must note that in this digital era a menace has emerged like Overweight, Opioids, Over-

Drinking, Over-smoking and now E-cigarettes. That is going to be worst public health epidemic, ever the world will witness.

Other causes of concern are increased rates of mortality and morbidity in the younger generation due to recently researched data on lead poisoning in children in India and the world over. The city of Flint in the USA has shown the catastrophe due to loss of IQ. Several reports on IQ reductions in Indian children from Boston area were linked to consumption of Indian spices. A report by the researchers from Boston Children's Hospital and Harvard School of Public Health who measured the amount of lead in the affected children pointing to the contamination of the products. The first ever Meta analysis done by Macquarie University on show Indian children exposed to lead reveals devastating link to intellectual disability.

The less we talk about the much media publicized subjects like Human Trafficking, Rape, Murder etc. now the introduction of Genetically Modified Humans in society as a result of the X-Men of scientific research will be a time bomb for disability. The family physicians fail to estimate the mental trauma causing disability.

Data published between 2010 to 2018 shows disuse burden and IQ decrement and Disability Adjusted Life Years (DALYs) due to ill health disability and early deaths. Therefore stress must be laid while managing the physically challenged about their social determinants like socioeconomic status, education, neighbourhood Public Health issues, Physical environment, employment and the manner in which the Social support provided by Government and Non-Government Organizations. One must assess how far these measures are contributing towards success or failures. These programs must help the physically challenged, preventing in the first instance and to overcome their disabilities so that the Physically Challenged can become useful and productive members of society. In addition the quality of healthcare provided plays an important role.



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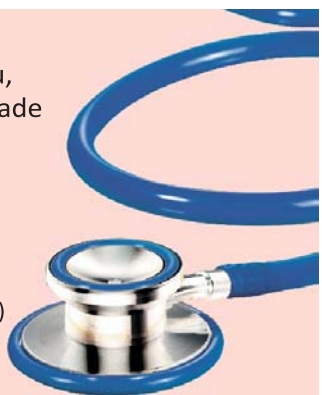
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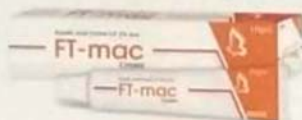


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SLUGGISH COGNITIVE TEMPO (SCT)



Dr Ashwani K. Sood

MD. DCH.FIAP

Prof & Head - Deptt of Pediatrics and Adolescent Medicine

IG Medical College Shimla

Email: docaksud@gmail.com

Sluggish cognitive tempo (SCT) refers to a cluster of sluggish, daydreamy, and apathetic behaviors and has historically been studied in tandem with attention-deficit/hyperactivity disorder (ADHD), first emerging in the literature in the mid-1980s (initially termed "slow tempo" or "sluggish tempo"). Although most studies continue to examine SCT in conjunction with ADHD, recent research demonstrates broader relevance of SCT for the fields of clinical child and abnormal psychology.

Sluggish cognitive tempo (SCT) refers to an impairment of attention in hypoactive-appearing individuals that first presents in childhood. It is also hypothesized that SCT is probably distinct from ADHD rather than being an ADHD subtype, although there is notable overlap with the ADHD predominantly inattentive and combined presentations.

However, it seems likely that a constellation of characteristic features of SCT may form the criteria for a newly defined childhood disorder in the foreseeable future, provided limitations in the extant findings can be addressed by future research. Most clinicians who assess and treat cases of attention deficit/hyperactivity disorder (ADHD) have likely seen and treated someone who falls within the parameters for SCT.

There is no official diagnostic term for children whom researchers have labeled as having SCT, and hence there are no officially endorsed criteria for its clinical recognition. The most salient identified symptoms of SCT are

- | | |
|-----------------------------------|---|
| 1) daydreaming | 8) slow-moving/sluggish |
| 2) trouble staying awake/alert | 9) doesn't process questions or explanations accurately |
| 3) mentally foggy/easily confused | 10) drowsy/sleepy appearance |
| 4) stares a lot | 11) apathetic/withdrawn |
| 5) spacey, mind is elsewhere | 12) lost in thoughts |
| 6) lethargic | 13) slow to complete tasks, and |
| 7) under-active | 14) lacks initiative/effort fades. |

The research conducted so suggests that SCT is an important construct for pediatric psychologists to be aware of and may also be directly useful for their research and practice. Perhaps most clearly, SCT should be evaluated as a possible consequence of early environmental risk, pediatric medical conditions, or injury (e.g., traumatic brain injury [TBI]). For example, it is possible that SCT mediates the relation between medical illness and subsequent internalizing problems/social withdrawal. In particular, examining SCT in the context of pediatric psychology may broaden our understanding of SCT as a construct, uncover associations with psychosocial functioning related to injury or illness, and shed light on predictors or moderators of treatment effectiveness. Therefore, it seems that, like ADHD, SCT may turn out to have multiple etiologies. Most causes may fall in the realm of neurobiological and genetic factors, perhaps less strongly than does ADHD.

Few studies suggest that SCT may be elevated in pediatric samples and relevant to children with prenatal alcohol exposure, epilepsy and all. It is also suggested that SCT may be an important construct for understanding the cognitive and behavioral deficits of childhood cancer survivors. Preliminary evidence also suggests that thyroid functioning is related to SCT but not to ADHD symptoms. Possible links between SCT and daytime sleepiness have also been noted. It is increasingly evident that SCT is related to youths' internalizing symptoms, social withdrawal, and, to a lesser degree, academic impairment.

So far it is now clear that SCT is distinct from DSM-IV ADHD, it is important to extend SCT research beyond the domain of ADHD. The future research should focus on taxonomies, such as the DSM, should create a higher-order category of attention disorders under which one would then break out ADHD and SCT as separate, semi distinct conditions, much like what is done now for the supra category of learning disabilities (LDs), rather than continue the mistaken view that SCT is a subtype of ADHD.

Very little research has been done on treatments for SCT, so no conclusions concerning its management can be made at this time.

The goal of this brief is to not only inform pediatricians and those working in the fields on clinical and child psychology on SCT, and to encourage pediatric psychologists to consider ways in which SCT may inform their own work with children, adolescents, and their families for the support of the children suffering with SCT.

ROLE OF GOVERNMENT AND NGO'S IN COMPREHENSIVE REHABILITATION CENTER



Dr. Koyeli Sengupta

Developmental Pediatrician,
Director- Autism Intervention Services, Ummeed CDC, Mumbai
Consultant- SRCC Narayana Children's Hospital, Mumbai
Member- Secretariat board, International Developmental Pediatrics Association (IDPA)

As per WHO, historically, the term Rehabilitation has described a range of responses to disability, from multi-disciplinary therapies and interventions to improve body function to more comprehensive measures designed to promote inclusion. Some people prefer to talk about promoting optimal child development versus rehabilitation, which suggests a restoration of functioning that is lost, which may not be the case in childhood developmental disabilities.

WHO's International Classification of Functioning, Disability and Health (ICF) provides a framework that can be used for all aspects of rehabilitation. Similarly, Urie Bronfenbrenner's Ecological Systems theory posits how children, with or without a disability are typically part of various ecosystems, including family, home, school and society; which inevitably interact with and influence each other in all aspects of the children's lives. The presenter will draw on her experiences from Ummeed Child Development, a not for profit organization in Mumbai, where both these models have influenced the development of comprehensive services to ensure that children with developmental disabilities reach their maximum potential. She will share Ummeed's efforts in multi-disciplinary clinical services, training, research and advocacy in varied areas of developmental disabilities. She will also talk about how NGOs like Ummeed find synergies with and support implementation of policies and schemes in childhood disability introduced by the Government. The objective of the talk is to encourage a broad angle view of childhood disability and rehabilitation.

NDT PERSPECTIVE IN PEDIATRIC PHYSIOTHERAPY.



Dr. Sanjay Parmar

PDF, PhD, MPT (Pediatrics), BPT,
Vice Principal, Professor,
SDM College of Physiotherapy.

Neurodevelopmental Therapy was developed by Dr. Karl & Berta Bobath. This approach is in clinical practice since many decades. Originally this approach was developed for adult hemiplegic patients where manual handling fetched various changes in the outcome of these patients. Theoretical background of NDT emerges from the Reflex Hierarchical

Theory but with advances in the knowledge about motor control, the theoretical basis of NDT is formed by the Neuronal Group Selection Theory. This approach mainly incorporates manual handling of the patients keeping in mind the Key Points of Control and Direction of Forces. These form the crucial concepts for understanding Neurodevelopmental Therapy in Clinical Practice. This therapeutic approach focuses mainly on the functional outcomes and avoidance of abnormal movement patterns. Thus, it focuses on regularization of tone for carrying out normal functional activities. This approach does provide an insight into the ICF model in clinical practice. There are various therapeutic approaches to handle the children with Neurodevelopmental impairments, but NDT can be regarded as the most acceptable form of therapy with better outcome in clinical practice.

LEARNING DISABILITY



Dr. Madhu Mahadeviah

Honorary Medical Director – Spastics Society of Karnataka,
Honorary professor of Pediatrics, Kempegowda Institute of Medical Sciences-Bangalore.

The neurodevelopment disorders are a group of conditions with onset in the developmental period of children. Included in the neurodevelopment disorders are intellectual disability or intellectual developmental disorder (formally called mental retardation), attention deficit hyperactive disorder, speech and language disorder, autism spectrum disorder and learning disability.

The manifestations of these disorders have their onset in different ages in the child's development and hence diagnosed at different ages. Hence proper understanding of developmental milestones and diagnosis as early as possible to provide help for the child to attain its potential

Unlike other neurodevelopment disorders diagnosis of learning disability can only be made at the child's school going age five (5) years and over. However the diagnosis can be confirmed at later years when appropriate tests like psychological and psycho-educational evaluations can be done.

Clinical diagnosis of Learning disability like any other disability physical and intellectual has to have complete history to arrive at the etiological diagnosis. Prenatal (Pregnancy, Parental age, Consanguinity, Metabolic or infectious), Perinatal (Prematurity, Hypoxia, Sepsis, Seizures, Respiratory difficulties), Post Natal (Infections, Head Injuries, Seizures,)

Education and child's successful completion of education and subsequent employment is the dream of every parent and any failure has significant impact on the family. It is important for every pediatrician to communicate the good as well as the difficult news to the family. Too many times parents cannot understand the child's limitation and will put unnecessary pressure which in turn will further impair child's confidence.

Learning disability is classified as specific learning disorder and global learning disorder. Incidence of learning disability is 5 to 15 percent comparatively more in boys than girls. Detailed causes, Classification, Counseling parent's family, role of genetics and other details will be discussed in the presentation.

ROLE OF GENETIC STUDIES FOR PREVENTION OF CHILDHOOD DISABILITIES



Dr. Usha Dave

Ph. D., D. H. A.

Research Director- MILS International India &
National Prof.-Haffkine Institute, Mumbai.

The 21st century has witnessed the rapid growth in genomic technology due to integration of advanced biotechnology and bio-informatics tools in laboratory practice. As a result, the vast number of childhood disabilities due to inherited or genetic causes can now be detected early in India, congenital and hereditary genetic disorders are becoming a significant health burden while infections & other factors are under control, emphasizing a need of early detection of genetic causes for prevention of childhood disabilities, involving mental & motor delay.

The reliable accurate genetic diagnosis of a child with global developmental disability is a clinical challenge and is most important in genetic counseling while predicting the recurrence risk and future guidance to the affected families. Despite the advances in laboratory diagnostic techniques, 30–40% of the genetic cases remain unidentified. Genomic technologies like cytogenetic microarray (CMA) & Next Generation Sequencing (NGS) platforms have opened the new era in clinical practice and offer the in-depth details about the genes involved and clinically correlated mutations, e.g. micro deletions, duplications, inversion, insertions, sub telomeric abnormalities & single nucleotide changes (SNP). The powerful bio-informatics tools coupled with NGS and CMA technology has led to the discovery of various unknown causes of childhood disabilities showing neurological, muscle, skeletal, vision or hearing impairments.

The basic genetic test like karyotype for chromosomal abnormalities is useful in detection of only common genetic syndromes, viz. Down Syndrome as a Trisomy 21, causing mental & motor delay. However, in majority of disabilities, it fails to detect any chromosomal aberrations. In such cases, the routine chromosomal testing is currently being replaced by a high resolution CMA which detects gains or losses of smaller than 10 kb size chromosomal abnormalities and has proven to be of significant utility in the diagnosis of children with global developmental delay or intellectual disability (ID) / with or without multiple congenital anomalies (MCA) and Autism Spectrum Disorders (ASD). Hence, ACMG has recommended CMA as a first-tier test in the genetic evaluation of children with ID. Similarly NGS is used when clinically suspected target gene involvement is more definite with a cost effective approach & efficacy to screen large number of suspected genes & their intronic or exonic changes. The Mass Spectrometry is another best approach for metabolic genetic diagnosis of many autosomal recessive congenital metabolic disorders which often show high consanguinity rate in our population. Their prevention is possible by early detection through Newborn Screening or index case metabolic diagnosis. The diet & therapeutic monitoring further prevents the developmental delay in the diagnosed child. Identification of the reliable metabolic marker in the fetus using amniocentesis or chorion villus biopsy approach is useful for choosing the appropriate reproductive option.

The childhood disabilities have different genetic causes ranging from single gene disorder (IEM) to complex genetic rearrangements (e.g. ID with Epilepsy). The genetic markers once correlate well with the clinical phenotypes with more certainty, the prevention of disability in terms of further deterioration in the index case or prevention of similar disability in the future is possible through appropriate genetic counseling to the parents. It is feasible to trace the genomic etiology with precise biomarkers in hand, for evaluating the recurrence risk of the disease which allows future pregnancy management and prenatal genetic diagnosis in the affected family.

The prenatal microarray, NGS or NIPS (Non-Invasive Prenatal Screening) tests can now detect genetic abnormalities in the high-risk fetus and is the most beneficial when ultrasonography identifies structural anomalies or dysmorphism in the fetus. The various reproductive options can also be offered to the parents using latest genomic technologies when socioeconomic, cultural & ethnic diversity prevails. However, the precise genetic diagnosis is made by the experienced medical geneticist to arrive at the proper phenotype-genotype correlation and ascertain the precise genetic cause of the disability.

The different cases with ID, MCA, ASD, chromosomal or single gene disorders will be illustrated to emphasize the role of genetics & genomics in prevention of childhood disabilities. The successful use of genomics in prenatal diagnosis will be discussed with case presentations indicating its significant role in prevention of disabilities with genetic aetiology.

The different cases with ID, MCA, ASD, chromosomal or single gene disorders will be illustrated to emphasize the role of genetics & genomics in prevention of childhood disabilities. The successful use of genomics in prenatal diagnosis will be discussed with case presentations indicating its significant role in prevention of disabilities with genetic aetiology.

ROLE OF PHYSIOTHERAPY MANAGEMENT IN CHILDREN WITH CEREBRAL PALSY



Dr. SNEHAL GOLANGADE

Pediatric Neuro-Developmental Therapist

PT ,MIAP, C/NDT (USA), C/SI (University of Southern California),
C/KT (Germany), DCH , CMT.

Founder of Sparsh Physiotherapy Center (Kolhapur)

The vital perspective of physiotherapy management in Cerebral Palsy is to support the child to achieve their potential goals of participation, physical and functional independence within their community by minimizing the effect of their physical impairments and to improve quality of life of the child and their family .Thorough and accurate assessment of the children with CP is essential to ensure chosen interventions meet the child needs. The Functional motor ability scales and international classification of functioning, disability and health should be used to guide assessment and intervention with all children diagnosed with CP to facilitate communication and goal settings. Further assessments should occur to ensure realistic goal setting and provide a baseline for therapy and for evaluation of therapy programmes.

Physiotherapy management plays a key role in children with CP as it deals with treating symptomatic impairments affecting the daily functions. It focuses on function, movement and optimal use of child's potential and uses physical approaches to promote, maintain and restore physical, psychological and social well being within all environments of the child including home, school, recreation and community. There are wide range of choices and availabilities of interventions and treatment approaches in physiotherapy to overcome the heterogeneous nature of Cerebral Palsy which take into account client preferences & values, clinician's values & experiences, current available research and resources. Responsible clinical reasoning regarding the management remains the paramount. It is important to develop individual treatment plans that are tailored to the specific needs and circumstances of the child with CP.

In the interest of optimal patient care, it is critical that timely, accurate and complete documentation is maintained during the course of individual client management. It is important to understand multidisciplinary team approach is considered best practice when working with children with complex needs. Whereas physiotherapeutic management remains one of the essential integral part of management.

A HIDDEN OBSTACLE IN CHILD DEVELOPMENT DEVELOPMENTAL COORDINATION DISORDER



Dr. Dinesh Saroj

Developmental Pediatrician
PROUDS CHILD DEVELOPMENT CENTRE, LokmatSquare, Nagpur
09970724628, dnshsaroj@gmail.com

Very First Question is,

Does your child feel low in confidence? Has he ceased to mix with same age peers and started avoiding social interaction? Does he perform poorly in academics which is disproportionately low to his intelligence quotient? Does he has handwriting issues?

If answer to any of these questions is yes, he might be having DEVELOPMENTAL COORDINATION DISORDER and needs a detailed assessment for the same.

Developmental coordination disorder (DCD) is a common neuro-developmental disorder and is considered to be one of the major health problems among school-aged children worldwide. It is characterized by marked impairment in the development of motor coordination skills. As per literature, this condition is known to affect 5–6% of school going children aged 5 to 12. However, the prevalence might be higher due to lack of awareness of the disorder and subsequent under reporting of the condition. As per literature, boys are 1.7 to 2.8 times more likely to have this disorder as compared to girls.

What are the presenting complaints?

1. Difficulty learning to tie-shoe laces,
2. Delay in or difficulty buttoning-unbuttoning of shirt.
3. Difficulty hitting shuttle with racquet while playing badminton, difficulty crossing roads alone.
4. Difficulty cutting food and in washing or combing hair.
5. Owing to poor coordination abilities.
6. These children do not easily keep up with their peers.
7. These kids are often poor in planning and organizational capabilities.
8. They behave so clumsy that parents cease handing over any delicate object to them.
9. Some might come up with history of frequent falls in childhood.
10. Difficulty with copying, drawing, painting, handwriting, organizing, and finishing work on time are the common presenting complaints.

Method of helping the child

1. At school, class teacher should position the child in her direct vision, from where he/she can hear instructions clearly and copy from the board easily.
2. We need to develop their organizational skills through activities like making lists, sequencing the events and using timetables.
3. Help them make use of stopwatches or timers to develop an awareness of time.
4. As Child with DCD may find it difficult to multi-task (e.g. tie a shoelace and follow directions simultaneously), Hence, we should avoid giving more than one work at a time.
5. Allow for the worksheet to be attached to the desk.

There are many such measures which may help Child with DCD and also for best outcome when multidisciplinary approach is utilized wherein Developmental Pediatrician, Psychologists, Occupational Therapists and Special Educators work in synchrony.

Developmental pediatrician is often the first point of contact who takes an in-depth insight into the case history and formulates a working diagnosis. Also, he makes a tentative plan for confirmation of diagnosis and the mode of intervention and allocates roles and responsibilities to his team members and looks after their execution.

To conclude, it is highly significant to identify these children as early as possible with the help of appropriate measurement tools so as to initiate early intervention measures and work in a multi-disciplinary team environment so that children with DCD are successful in their life.

ROLE OF OCCUPATIONAL THERAPY AND SENSORY INTEGRATION IN NEURODEVELOPMENTAL DISORDERS



Dr. Sumit Shinde

B.O. Th. (Mum) C.C.E.

Occupational Therapist and Rehabilitation Consultant

Neurodevelopmental disorders refers to an umbrella term which caters to various Developmental and Learning disorders arising due to impairments of the growth and development of the brain and/or central nervous system such as Intellectual disability, Specific learning Disorders, Autism Spectrum Disorders, motor Disorders, Tic Disorders, Traumatic Brain Injury, Speech Language and Communication Disorders, Genetic Disorders, Behavior and conduct disorders. The higher functions of the brain viz. emotion, learning ability, self-control and memory are affected in the above mentioned disorder.

According to the Sensory Integration theory*; Brain receives the information of Body and Environment through various sensory systems. Appropriate sensory processing and modulation leads to appropriate sensory registration which makes it meaningful experience for the brain by integrating all the senses. This helps Brain to accommodate, assimilate and Retrieve an Environmental and Bodily experience for better Learning, Self-Regulation and Higher function Development.

An Occupational Therapist assesses the Sensory-motor functioning in Neuro-developmental Disorders and the Sensory Integration Therapy and treatment helps in developing these higher functions and also helps to achieve maximum functional independence.

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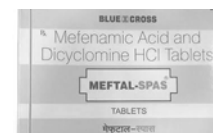
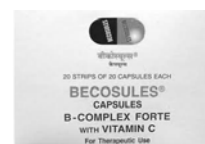
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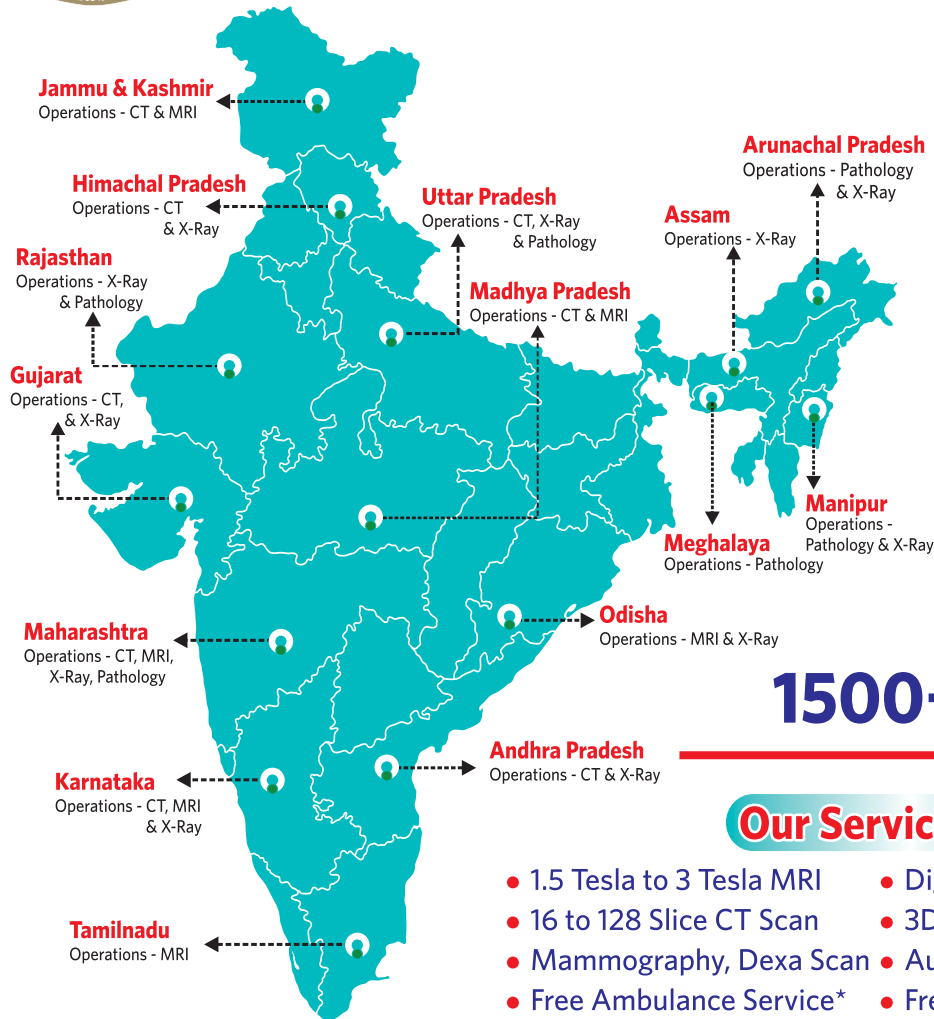
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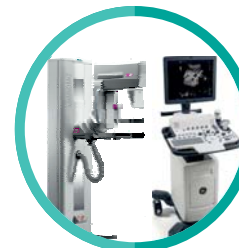
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