



# DPT

## DEVELOPMENTAL PEDIATRICS TODAY



May 2019

### Monthly e-Newsletter of IAP Chapter of Neurodevelopmental Pediatrics

#### IAP CHAPTER OF NEURO DEVELOPMENTAL PEDIATRICS

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## President's Page

Dr Digant Shastri - Pediatrician, Parenting and Peace  
- Indian Pediatrics - <https://www.indianpediatrics.net/may2019/361.pdf> in which he requests pediatricians to play a crucial part in the optimum growth and development of children, and thereby their health and happiness.



## Editorial

### The Yin and Yang



It was a family wedding in rain swept Trivandrum. One of my friend's son was flying from Mumbai. He was 11 and he was traveling alone. He was to be received by his grandparents who were also attending the wedding. It was then that I realised the complicated procedures of minors traveling alone. The airline was insisting on multiple identity checks and made sure they escorted him to the waiting grandparents. Years later I had the consternation of hearing that as a young adult ,he quit two successive professional education courses,one in India and the other in the middle East at great financial loss to his parents. Unfazed,he'd joined a nondescript course in his home town. At 11 his caretakers could ensure his journey was safe and smooth but at 20 they were at a loss to guide his career path .

Of all the various explanations that comes to my mind ,I think the lack of frustration tolerance gets the maximum currency. There are several news reports now on helicopter parenting even in UK. Of parents of adult students phoning up professors and visiting them. In traditional societies like India it's not even considered amusing.Its just a reality.

As parent of an adult (and a nearly adult) sons I am also not immune to temptations to drone over my children. But are we doing the right thing by worrying over the education or for that matter emotional needs of our adult children? In India where education expenses come from parents,lot of other factors come into play.

By molycoddling our children we are probably extinguishing their will to fight . This is not to say that twenty year olds take right decisions. Latest research shows that neural circuitry is not complete by even 30 years of age. In one of my recent lectures I jokingly remarked that "now we know why we have sudden insights into life at 40".

So it isn't about maturity. As middle aged couples ,Indians are making a beeline to counsellors ,so it's obvious young need guidance. The question is how we draw the line and how we prepare them for decision making . As a student of Developmental neurology I'm aware that our brain develops as much as we make it work. To quote a famous neuroscientist neurons that fire together wire together. If we repeatedly reinforce a particular pathway that becomes reinforced. We might like to romanticise emotions and feelings,the fact is neurochemistry plays a huge part in it.



## Editorial

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And it isn't all genes as they once believed. Our experiences and stress do mould how our brain will respond . The fast expanding role of what's called epigenetics is all about what happens after your genes write your destiny .. incompletely.

If we constantly pamper our offsprings with whatever they want ,their neural circuits will never learn to tolerate frustration and failure. One of my psychiatrist mentors once remarked. We buy a expensive toy for our kid. He or she plays with it ,gets bored and asks for another. If we buy another expensive toy without batting an eyelid,he or she will repeat it with their partner. He may or may not have been right about the explanation for increasing divorce. But the point of developing tolerance to frustration and acceptance of the word "No "is well taken .

When we grew up,in the eighties,the tenth pass rates were around 50 percent. Suicides were rare if not unheard of. Today the pass percentages are in nineties. Still suicide helplines are ringing off the hook in exam season. Only because they just can't tolerate a poor mark.

In the field of differently abled children we often speak of twin attributes of vulnerability and resilience.

Our children need more and more resilience and less and less vulnerabilities.

All of us are vulnerable in several ways. What makes us tick or what should make us tick is our resilience. Our systems should rebound from stress. The famous idiom the cradle will rock is about consistent and resilient parenting practices. It's certainly not about pampering and mollycoddling.

To make it short , every time parents give in to an unreasonable demand of a child they're reducing their resilience and tolerance for frustration. Acid attacks by stalkers is often an expression of inability to handle rejection. Girls resort to self harm or emotional blackmail . The number of late teens with attempted self harm reporting to counsellors are increasing ,often for trivial reasons .

Emotional resilience and vulnerability are the yin and Yang of the universe of the mind.

Let's not create a generation of the meek.

**Dr. Santhosh Rajagopal**  
Chief Editor



## Chairperson's Message

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Dear colleagues,

Each May, Better Hearing & Speech Month (BHSM) provides an opportunity to raise awareness about communication disorders. This year, the theme is "Communication Across the Lifespan." Work towards highlighting the importance of early detection and intervention in the treatment of communication disorder.



International Cri du Chat awareness week is May 1-10, 2019 and International Cri du Chat Awareness Day is May 5th. 2019 marks the 55th year of the finding of Cri du Chat Syndrome by Dr. Jerome Lejeune. Stroke awareness month (May) and day (May 5th) is dedicated to education and creating awareness for recognizing strokes in babies, children & teens.

May 14th is the third annual Apraxia Awareness Day to ensure correct identification and appropriate treatment of children with apraxia - "Every Child Deserves a Voice."

It is heartening to note that IAP is also doing its bit to promote health of differently abled children by including 4 programs of our chapter - namely, Newborn Hearing Screening Program, NDD Guidelines workshop, Revised PSPP module, All About Autism as IAP Action Plans for 2019.

We request all members to actively involve in these activities and send in reports with photos of the events for publication in DPT.

Regards and wishes,

**Dr. Jeelson C. Unni**

Chairperson

IAP Chapter of Neurodevelopmental Pediatrics



## Snippets from the Secretary

Respected Seniors , colleagues and dear friends,

It is indeed a proud moment for the chapter when Neuro developmental Pediatrics is being increasingly recognised as a promising branch of Pediatrics .



The response to the ongoing NDD workshops across the country, the welcome response to the modules that the chapter has been working on developing or the interest and response to the fellowship program all point to the fact that Neuro developmental Pediatrics has finally come of age!!

The stalwarts and seniors who have initiated this movement two decades ago must have never anticipated such a tremendous growth and upheaval in the field in such a short time but we owe it to their foresight and initiative that we are able to reap benefits of the seeds sown by them towards creating awareness in the field.

Autism awareness month has seen the newsletter flooded with activities in last month's issue and this one. If any activities have been inadvertently been missed out apologies for the same and we request you to please mail us the activities and we will make a sincere effort to try and publish all.

The National conference preparations are fast picking pace at Pune and we again invite each and every one of you to attend, present papers/posters and make it an annual event in your itinerary to help to keep in touch with the fraternity. We must remember that our united stand and collective voice is the biggest strong point that will help us create an awakening in society and the system about the way disability and neuro developmental disorders are perceived and accepted .

Let us keep in touch through this annual event and be briefed on happenings and the latest academic updates in our field. We hope to bring to you a universally applicable practical and academically fulfilling event at NCDP 2019 at Pune.

A warm welcome awaits you on 31st August and 1st September 2019 at the NCDP in Pune.

Happy learning!

**Dr Leena Srivastava**

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## Journal Scan

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### **Extreme prematurity and attention deficit: epidemiology and prevention; T. Michael O'Shea, 1,\* L. Corbin Downey, 1 and Karl K. C. Kuban; Front Hum Neurosci 2013; 7: 578**

#### **Extreme prematurity and attention impairment**

Preterm infants are at increased risk for a wide range of developmental disorders, including sensory, motor, cognitive, and other brain disorders (Lorenz et al., 1998; Bhutta et al., 2002; Aarnoudse-Moens et al., 2009), and the risk is highest for those infants born before 28 weeks gestation, i.e., extremely preterm or extremely low gestational age infants (Wood et al., 2005; Serenius et al., 2013). As large cohorts of extremely preterm infants have reached school age, the prevalence of brain dysfunctions that affect academic success has been quantified, and antecedents and correlates of these problems have been better characterized. The most prevalent of these is attention deficit/hyperactivity disorder (ADHD) (Hack et al., 2009; Johnson et al., 2010).

Based on screening questionnaires, such as the Child Behavioral Checklist (Hille et al., 2001) and the Strengths and Difficulties Questionnaire (Elgen et al., 2002; Samara et al., 2008; Delobel-Ayoub et al., 2009), children born extremely preterm perform worse than full term children on attention scales. Using Diagnostic and Statistical Manual-based criteria, extremely preterm children have a risk of ADHD that is four times that of full term controls (Johnson et al., 2010; Scott et al., 2012).

Some studies report an association of extreme prematurity with the inattention type of ADHD but not the hyperactivity/impulsivity type (Hack et al., 2009; Johnson et al., 2010; Johnson and Marlow, 2011), while others report associations with both types of ADHD (Anderson et al., 2011; Scott et al., 2012). In one sample, inattentive behaviors were explained by sequential memory problems, while hyperactive behaviors were explained by global intellectual impairment (Nadeau et al., 2001). The attention impairment among



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preterm infants affects a range of domains of attention including selective attention, sustained attention, attention encoding, shifting attention, and divided attention (Mulder et al., 2009; Anderson et al., 2011).

In the general population ADHD is associated with conduct disorder (Nock et al., 2006), but this does not appear to be the case among preterm infants (Elgen et al., 2002; Hack et al., 2009; Johnson et al., 2010; Scott et al., 2012). Extremely preterm infants with ADHD are more likely to have cognitive impairment than those without ADHD, and in one study there was no association between extreme prematurity and ADHD among infants without cognitive impairment (Johnson et al., 2010). Impaired attention is a likely contributor to extremely preterm children's increased risk of cognitive impairment and behavioral problems (Weijer-Bergsma et al., 2008). Moderately preterm children exhibit some developmental catch up in selective attention so that the difference between these children and term children narrows with increasing age (Mulder et al., 2009).

### **Risk factors for attention impairment among extremely preterm infants**

Social disadvantage is more prevalent among mothers delivering prematurely (Paneth, 1995), and is a risk factor for attention problems during childhood among preterm infants (Hack et al., 2009; Lindstrom et al., 2011; Scott et al., 2012). This variable conveys information about a variety of factors including race, maternal psychosocial stress, and mother's education (Adler et al., 2012). In unselected samples, maternal smoking,

which is associated with preterm delivery, has been associated with attention impairment (Nomura et al., 2010).

The strong inherited contribution to ADHD (Thapar et al., 2012) appears to be less important among preterm infants (Johnson and Marlow, 2011). Male sex, which is predictive of more severe neonatal illness after preterm birth, is associated with the hyperactive type of ADHD among extremely low birth weight children (Hack et al., 2009). Neonatal illnesses which occur frequently after extremely preterm birth, such as necrotizing enterocolitis and chronic lung disease, could explain the smaller contribution of genetics in this group. In one extremely preterm cohort, necrotizing enterocolitis was predictive of impaired selective attention but not other attention domains (Anderson et al., 2011). At school age, children who had recovered from neonatal chronic lung disease, as compared to preterm children without chronic lung disease, had more attention problems, based on teacher's report (Gray et al., 2008). However, in two other cohorts no neonatal factors were predictive of an attention problem (Hack et al., 2009; Johnson et al., 2010). In another cohort of extremely preterm children, an Apgar score less than 8 at 5 min was associated with a higher risk of using medication for ADHD (Lindstrom et al., 2011).

Among very low birth weight infants, intraventricular hemorrhage (and presumably the accompanying brain damage) (Indredavik et al., 2010) and subnormal head growth (Peterson et al., 2006) are associated with attention problems. In a large prospective study, white matter injury was associated with a 2.7-



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fold increase in the risk of ADHD at 6 years of age (Whitaker et al., 1997). Ultrasound is only modestly sensitive for detection of white matter abnormalities (Maalouf et al., 2001; Inder et al., 2003; Miller et al., 2003). More sensitive imaging techniques, using magnetic resonance imaging (MRI) also have identified structural correlates of attention impairment. Among adolescents who had very low birth weight, thinning of the corpus callosum and reduced white matter volume were associated with attention deficit but were not associated with hyperactivity (Indredavik et al., 2005). Diffuse tensor imaging, which identifies disruption or disorganization of white matter tracts, indicates that reduced fractional anisotropy of the external capsule and middle and superior fascicles is associated with higher inattention scores on the ADHD Rating Scale IV (Skranes et al., 2007).

### **Inflammation and cerebral white matter damage in extremely preterm infant**

Even when an infection is distant from the brain, maternal and neonatal infections are associated with perinatal brain damage (Dammann and O'Shea, 2008). Administration of endotoxin to a variety of immature experimental animals results in cerebral damage, and the damage is mediated by inflammation-related molecules including cytokines, chemokines, adhesion molecules, and matrix metalloproteinases (Wang et al., 2006). A range of clinical disorders in humans has been associated with perinatal infection and inflammation, including ultrasound-defined white matter injury, microcephaly, cerebral palsy, cognitive impairment, behavioral dysfunctions, and psychiatric illness (Hagberg et al., 2012).

Biomarkers of perinatal infection and inflammation include neutrophil infiltration of the placenta (Holzman et al., 2007) and inflammation-related proteins in the amniotic fluid and neonatal blood. Clinical initiators of inflammation include maternal infections (McElrath et al., 2011), lung injury induced by mechanical ventilation (Bose et al., 2013), necrotizing enterocolitis (Martin et al., 2013), and neonatal sepsis (Leviton et al., 2012).

In a large cohort of extremely preterm infants, the ELGAN cohort, both clinical indicators (McElrath et al., 2009; Martin et al., 2010) and biomarkers of inflammation (Leviton et al., 2010) have been associated with perinatal brain damage and subsequent developmental impairment at 2 years of age. In this cohort, persistent/recurrent elevations of seven inflammation-related proteins, defined as an elevation on at least 2 days a week or more apart in the first 2 weeks of life, are associated with a 2- to 3.9-fold increase in the risk of an attention impairment identified at 2 years of age using the Child Behavioral Checklist [manuscript under review].

Maternal or neonatal infections occur in a majority of pregnancies that result in an extremely preterm birth, yet the prevalence of ADHD among the offspring is typically less than 20%, suggesting that inflammation requires other factors, which could include genetic susceptibility, to contribute to the occurrence of ADHD. In a genetically isolated community with a high prevalence of ADHD, severe maternal respiratory infection was associated with a 3.3-fold increase in risk, suggesting that genetic factors could modify associations between inflammation and ADHD in humans (Pineda et al., 2007). In a preclinical



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model, inflammation-induced attentional impairments and abnormalities in dopamine neurons were more severe in mice genetically deficient in *Nurr1*, which plays important roles in differentiation, migration, and survival of dopaminergic neurons (Vuillermot et al., 2012).

Might interventions to reduce perinatal inflammation decrease the risk of attention impairments among extremely preterm children?

### Antenatal interventions

The consistent association of perinatal inflammation and brain disorders, including attention impairment, suggests that immunomodulatory interventions might decrease the risk of attention problems in extremely preterm infants.

Antenatal treatment of the mother with glucocorticoids might modulate inflammation's effects on the brain. For example, antenatal glucocorticoids decrease the risk of cerebral palsy (Roberts and Dalziel, 2006). However, in two randomized clinical trials of antenatal steroids, attention abilities were not improved, nor was the risk of ADHD reduced, by this intervention (Dalziel et al., 2005; Crowther et al., 2007).

Maternal infection is a frequent initiator of preterm labor (Romero et al., 2007), and often is accompanied by a fetal systemic inflammatory response (Gotsch et al., 2007). However, antenatal antibiotic treatment of mothers with preterm labor, but without overt infection, does not decrease the risk of attention problems in the offspring (Kenyon et al., 2008a,b).

Antenatal treatment with magnesium sulfate reduces the risk of cerebral palsy in offspring

of mothers who develop preterm labor prior to 30 weeks gestation (Rouse, 2007). However, the effect of this intervention on attention problems has not been reported (Doyle et al., 2009).

Children of obese mothers are more likely than children of women with a pre-pregnancy weight in the normal range to have a low Bayley Scales Mental Development Index at age 2 years (Hinkle et al., 2012) and a lower reading score at kindergarten age (Hinkle et al., 2013). Since maternal pre-pregnancy obesity is associated with later inflammation in the offspring (Leibowitz et al., 2012), interventions that reduce maternal obesity could reduce the risk of attention problems in the offspring.

### Postnatal interventions

Postnatal strategies to decrease inflammation-related perinatal brain injury include interventions to prevent initiators of inflammation and broader strategies to modulate inflammation.

The three most obvious initiators of systemic inflammation are bacteremia (Leviton et al., 2012), mechanical ventilation. (Bose et al., 2013), and necrotizing enterocolitis (Martin et al., 2013). Our hope is that whatever reduces the occurrence of these three major complications in the NICU will reduce the later occurrence of attention problems.

Broader strategies to modulate inflammation include those that shorten or minimize the intensity of inflammation once initiated. For example, caffeine reduces the risk of chronic lung disease, an inflammatory pulmonary condition, and decreases the risk of neurodevelopmental impairment. Unfortunately, the effects of



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perinatal caffeine on attention problems have not been reported (Schmidt et al., 2007).

Although postnatal steroids decrease lung inflammation (Halliday et al., 2009, 2010), no evidence has been offered to date that attention abilities are improved by postnatal steroids (Yeh et al., 2004). Similarly, human milk is associated with a reduced risk of necrotizing enterocolitis (Sisk et al., 2007), but other than a small pilot randomized trial of sphingomyelin-fortified human milk (Tanaka et al., 2013), evidence is lacking of an effect of human milk on attention in extremely preterm infants.

Other potential approaches to broadly reduce systemic inflammation have been suggested by preclinical studies. In animal models of perinatal brain injury which either directly or indirectly involve inflammation, (Hagberg et al., 2002; Wang et al., 2006, 2009; Thornton et al., 2012) injury can be attenuated by hypothermia (Fukuda et al., 2001; Tomimatsu et al., 2001, 2003), melatonin (Robertson et al., 2013), pentoxifylline (a methyl xanthine) (Dilek et al., 2013), and erythropoietin (Kumral et al., 2007). Hypothermia is an effective neuroprotective agent in humans born near term (Jacobs et al., 2013), and will be studied in preterm infants [ClinicalTrials.gov identifier: NCT01793129]. Melatonin and erythropoietin also are being studied as neuroprotective strategies for preterm infants [ClinicalTrials.gov identifier: NCT00649961 (melatonin) and NCT01378273 (erythropoietin)]. As mentioned above, caffeine, a methyl xanthine, appears to be

neuroprotective in preterm infants although data about its effect on attention is lacking.

In addition to acute interventions, strategies might be found for attenuating the sustained disruption to brain development that persists months and perhaps years after an initial insult to the immature brain. The mechanisms underlying sustained disruption appear to include sustained inflammation as well as epigenetic changes, in which case an extended window of opportunity for intervention might exist (Fleiss and Gressens, 2012).

### Reviewer's Comments :

Extremely preterm (born < 28 weeks gestation) infants have an increased risk of attention problems. Children born extremely preterm who develop ADHD are more likely to have cognitive impairment than those without ADHD.

Some studies have shown that follow up of Extreme preterm with ADHD do not have conduct disorder.

Better understanding of the antecedents of these problems can lead to prevention strategies. Perinatal systemic inflammation, an antecedent of structural and functional brain disorders in extremely preterm infants, appears to be an antecedent of attention problems. Interventions to prevent initiators of inflammation or modulate systemic inflammation might decrease the risk of attention problems among children born extremely preterm



## SLD according to DSM-5

Dr Jeeson C Unni

DSM-5 considers SLD to be a type of Neurodevelopmental Disorder that impedes the ability to learn or use specific academic skills (e.g., reading, writing, or arithmetic), which are per-requisites for acquiring other academic learning. The learning difficulties are an 'invisible handicap'; meaning that it is not expected in a child who is otherwise developmentally well. Early signs of learning difficulties may appear in the preschool years (e.g., speech delay, difficulty learning names of letters or counting objects, refusal to rite or read), but they can only be diagnosed reliably after starting formal education by age 6-7 yrs. SLD is understood to be a cross-cultural and chronic condition that typically persists into adulthood (as nerves do not regenerate), albeit with cultural differences and developmental changes in the way the learning difficulties manifest. For example, in English-speaking countries, children struggle to learn the correspondence between letters and sounds in order to decode single words accurately, whereas adults may have mastered basic decoding skills but read slowly and with effort. By contrast, in countries with a non-alphabetic language or in which the correspondence between speech sounds of one's language and the letters used to represent those sounds is much simpler than in English, children with SLD master letter-sound correspondence quickly, and both children and adults with SLD struggle with reading fluency.

SLD is a clinical diagnosis that is not necessarily synonymous with 'learning disabilities' as identified within the education system: that is, not all children with learning disabilities/difficulties identified by the school system would meet a DSM-5 clinical diagnosis of SLD. By contrast, those with a DSM-5 diagnosis of SLD would be expected to meet the educational definition. Meaning - there are many causes for learning problems other than SLD which needs to be considered and one prime cause is the lack of learning environment at home or in school. The No Detention Policy in India, has to a large extent, decreased the need for children to learn and the teachers to teach.

### Changes made to SLD in DSM-5

The 2 major changes in DSM-5 diagnostic criteria for SLD, necessitated some other changes:



## SLD according to DSM-5

1) Categories of SLD labelled with 'specifiers' to characterize the specific manifestations of learning difficulties at the time of assessment in three major academic domains, namely reading, writing, mathematics (e.g., SLD With impairment in reading: and

2) Elimination of the IQ-achievement discrepancy requirement and its replacement with four criteria (A – D), all of which must be met.

Criterion A refers to the key characteristics of SLD (at least one of six symptoms of learning difficulties that have persisted for at least 6 months despite the provision of extra help or targeted instruction).

Criterion B refers to measurement of those characteristics (the affected academic skills are substantially and quantifiably below those expected for age and cause impairment in academic, occupational, or everyday activities, as confirmed by individually administered standardised achievement measures and comprehensive clinical assessment).

Criterion C refers to age at onset of problems (during the school-age years, although may not fully manifest until adolescents in some individuals), and

Criterion D specifies which disorders (Intellectual disabilities, uncorrected auditory or visual acuity problems, other mental or neurological disorders) or adverse conditions (psychosocial adversity, lack of proficiency in the language of instruction, inadequate instruction) must be ruled out before a diagnosis of SLD can be confirmed.

### Implications of these changes in DSM-5 criteria for SLD

A. These changes are likely to have some impact on daily clinical practice, clinical research, the educational system, professional organizations and advocacy groups for LD, as well as on individuals with LD, their families, and perceptions of LD in the community.

One substantial practice shift is necessitated by the change from subtypes of LD (Reading Disorder, Mathematics Disorder, Written Expression Disorder) to one overarching category. For clinicians and researchers, the change will require comprehensive assessment of academic skills and may reduce the challenges associated with defining the subtype of LD (e.g., when test scores vary across academic domains or tests, with some falling just below clinical threshold). Instead, specifiers may be used to more precisely characterize the range of problems present at the time of assessment. The identification of a single overarching category of LD is consistent with many educational systems in which LD is delineated as an eligible category for special education, other services. This change may help reduce the confusion of parents and educators when 'additional' LDs are identified in later school years, and help them better understand the developmental changes in manifestation of SLD, which are in part triggered by the increasing learning demands of the curriculum (e.g., early struggles to read single words are often followed by difficulties learning math facts, spelling problems, and difficulties understanding what is read, including mathematical word problems). However, this change also may require retraining



## SLD according to DSM-5

of clinicians, school psychologists, and educators to identify and understand this conceptualization of LD and how to design learning pathways for each student with LD, who will have divergent and changing manifestations of their learning difficulties. Hopefully, this change might lead to better alignment of practice between clinical and educational communities. Will this change have a negative impact on individuals with a diagnosis of dyslexia or dyscalculia (who often refer to themselves as 'dyslexic' or 'dyscalculic') or on dedicated professional organizations or advocacy groups (e.g., International Dyslexia Association)? It should not, since these terms may be used to specify the nature of their SLD, according to individual preference. Moreover, the requirement to use specifiers to characterize the range of academic skills affected by dyslexia, might increase awareness that 'dyslexia' typically encompasses far more difficulties than those related to decoding and spelling words.

A second practice shift is indicated by the abandonment of the IQ-Achievement discrepancy criterion, as well as the omission of cognitive processing deficits in the diagnostic criteria. The discrepancy model has served as the fundamental conceptualization of LD for decades, despite robust evidence that it is conceptually and statistically flawed. Thus, although intellectual assessment has been the core of psychological assessment for LD for decades, it will no longer be required for a DSM-5 diagnosis of SLD, except when Intellectual Disabilities are suspected. Similarly, in DSM-5, there is no requirement for lengthy and costly neuropsychological

assessment of cognitive processing skills for a diagnosis of SLD: such assessment might inform intervention plans but is not required for diagnosis. This means that psychologists may be able to shift from 'assessment for diagnosis' to 'assessment for intervention' and have more time to provide psychoeducation and consultation with parents and teachers. For the education system, the elimination of the IQ-achievement discrepancy criterion might mean they are able to provide special education services to children with SLD and lower IQ (e.g., IQ score above  $70 \pm 5$ ), but who do not have an Intellectual Disability. These children show a similar response to intervention as do children with SLD and higher IQ scores.

A third and related shift will be needed by the new criteria (particularly Criteria A and B), which call for evidence of symptom persistence and the use of a wider array of data that may be used to confirm and quantify low academic achievement. By contrast to DSM-IV, psychometric data alone are insufficient for a DSM-5 diagnosis of SLD. A much closer collaboration is required between educators, clinicians, and parents, to provide access to formal and informal school records, academic portfolios, instructional history, as well as information from psychoeducational and clinical assessments. Closer and ongoing collaboration between clinicians, educators, parents, and the individual with SLD might lead to less confusion and frustration while navigating both worlds (educational, clinical) and better outcomes.



## Congenital Abnormalities

About 3% to 4% of all babies born in the United States have congenital abnormalities that will affect the way they look, develop, or function—in some cases for the rest of their lives.

Congenital abnormalities are caused by problems during the fetus's development before birth. It is important for moms and dads to be healthy and have good medical care before and during pregnancy to reduce the risk of preventable congenital anomalies.

Advances in perinatal testing and new diagnostic tests (i.e. amniocentesis, chorionic villus sampling, etc.) have made it possible to detect chromosomal and genetic related causes of congenital abnormalities earlier.

### 5 Categories of Congenital Abnormalities

#### Chromosome Abnormalities

Chromosomes are structures that carry genetic material inherited from one generation to the next. Twenty-three come from the father; twenty-three come from the mother. The genes carried on the chromosomes determine how the baby will grow, what she will look like, and to a certain extent, how she will function.

When a child is born without 46 chromosomes, or when pieces of the chromosomes are missing or duplicated, she may look and behave differently from others her age and may develop serious health problems (e.g. Down syndrome).

#### Single-Gene Abnormalities

Sometimes the chromosomes are normal in number, but one or more of the genes on them are abnormal.

Autosomal dominant inheritance is a genetic abnormality that can be passed on to the child if one of the parents has the same abnormality.

Autosomal recessive inheritance is a genetic abnormality that can be passed on to the child only if both parents carry the same defective gene (e.g. Cystic fibrosis, Tay-Sachs disease, sickle cell anemia). In these cases, both parents are normal, but 1 in 4 of their children would be expected to be affected.



## Congenital Abnormalities

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X-linked conditions are genetic abnormalities that mainly occur in males (e.g. hemophilia, color blindness, forms of muscular dystrophy). Females may carry the abnormal gene that causes X-linked recessive disorders, but they may not show the actual disease.

X-linked dominant conditions occur in both males and females; however, they are more severe in males (e.g. certain neurological conditions affecting the brain, skin disorders and types of skeletal or craniofacial disorders).

### Conditions During Pregnancy That Affect The Baby

Certain illnesses during pregnancy, particularly during the first nine weeks, can cause serious congenital abnormalities (e.g. maternal infections such as cytomegalovirus, chicken pox or rubella).

Chronic maternal conditions (e.g. diabetes, hypertension, autoimmune diseases such as lupus, myasthenia gravis or graves disease) can negatively affect the developing fetus. Maternal hypertension can affect blood flow to the fetus impair fetal growth.

Alcohol consumption and certain drugs during pregnancy significantly increase the risk that a baby will be born with abnormalities (e.g. fetal alcohol spectrum disorders).

Eating raw or uncooked foods during pregnancy can also be dangerous to health of the mother and fetus and should be avoided.

Certain medications, if taken during pregnancy, also can cause permanent damage to the fetus, as can certain chemicals that can pollute air, water, and food. Always check with your doctor before using any medication or supplement while you are pregnant.

### Combination of Genetic and Environmental Problems

Some congenital abnormalities may occur if there is a genetic tendency for the condition combined with exposure to certain environmental influences within the womb during critical stages of the pregnancy (e.g. Spina bifida and cleft lip and palate).

Taking folate supplements prior to conception and during pregnancy decreases the risk of neural tube defects. However, there is also a genetic influence to this type of congenital anomaly.



## Across the Country



A CME for GPs for autism awareness month was conducted by Dr Leena Deshpande at Navi Mumbai. Approx 60 practitioners attended. Overview of NDD in children, dev surveillance and early autism symptoms were some of the topics discussed.



Autism awareness day was celebrated by IAP Pune and Child Development & Guidance Centre of the Dept of Pediatrics, Bharati Vidyapeeth Medical College and hospital with an awareness program for parents of young children newly diagnosed with autism spectrum disorder.. The workshop held every year aims to help parents deal with the diagnosis by giving them information about the disorder, equipping them with teaching strategies, discussing evidence based intervention and training them to manage challenging behaviours... The platform gave parents a chance to interact and voice their concerns about accepting the diagnosis along with making the path ahead clearer.. Around 30 parents attended. A diary designed by the CDGC team was given to each parent to monitor and document the child's progress on follow up. Posters to create awareness were also displayed for the whole month of April in the corridors and waiting areas of the hospital.

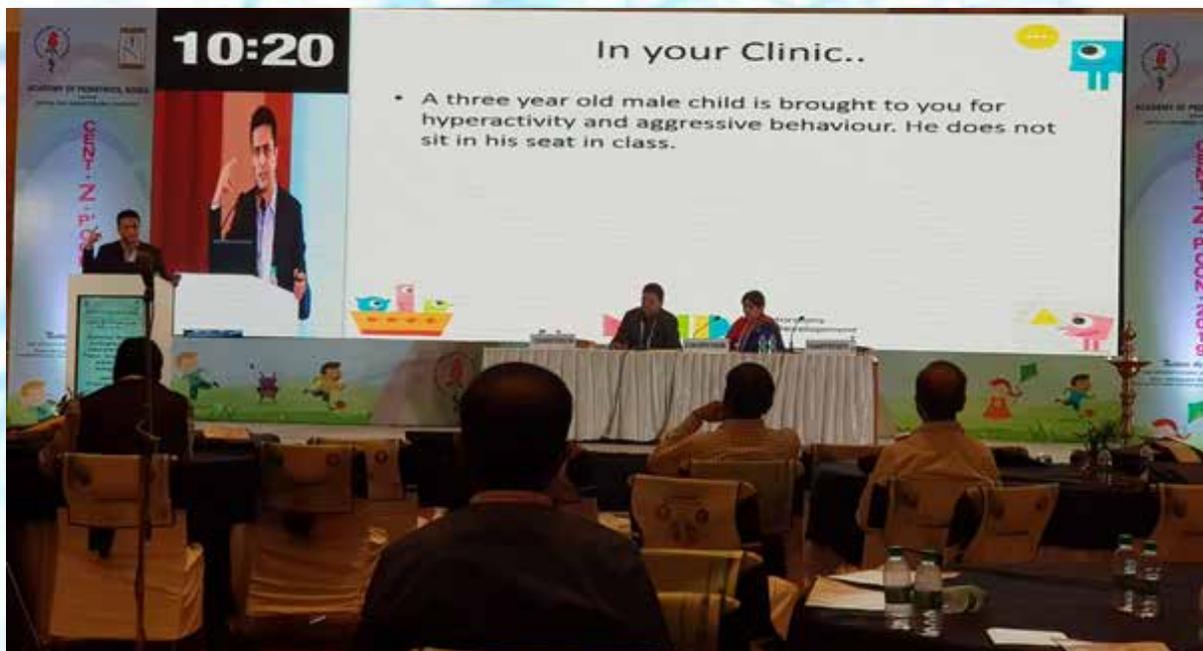




## Across the Country



Dr Sujit Kundu and his team of Cradle CDC did an awareness campaign on Autism on 16th May in Kalimpong. Mani Trust organisation, NGO organised the session in association with Kalimpong district hospital. ADM, SDO, CMOH of Kalimpong district, Superintendent of the Kalimpong Hospital, doctors, school teachers and some social activists were present as participants. Almost 40 participants were there in the event. The talk covered Early identification & intervention of Autism and Speech & Language Delay in Kids.



A talk in Central zone Pedicon by speaker Dr Samir Dalwai chaired by Dr Chhaya Prasad.



## Accross the Country



Dr Chhaya Prasad chaired a session on Community Rehabilitation for persons with intellectual Disability at the 6th National Conference of the World Association for Psychosocial Rehabilitation - Theme- Indigenous and Pragmatic Models for Rehabilitation.



Camp for Learning Disability and Speech & Hearing problems was held at Child Care Center, Cochin by Dr Abraham Paul and his team in the presence of Chapter stalwart Dr SS Kamath. 64 children benefitted from the camp.



## Across the Country



Dr Chhaya Prasad in their weekly parent training program for Parents of children with special needs. The focus is on Highly motivating Positive Parenting, Acceptance Style of Parenting, Assertive Disciplining Methods, Token Rewards for behaviour Interventions and training parents for ADL's.

**CERTIFICATE WORKSHOP SERIES**

**PARISAR ASHA** New Horizons Group

**EDUCATORS' EXCELLENCE PROGRAMME WEEK**  
22nd April-27th April 2019  
Ideal for Educators, Teachers, Management, Students, Aspiring Educators and Parents.

Workshop Timing: 10.00 am - 1.00 pm      Workshop Timing: 2.00 pm - 5.00 pm

**22nd April 2019, Monday at Parisar Asha, Santacruz West**

<b>Developing Creativity</b> Ms. Sapana Shindekar Therapist, Chennai, India Ms. Sukhita Sahasrabudhhe Manager, HR & Operations - Group HR, Parisar Asha	<b>Preventing Abuse &amp; Addiction</b> Dr. Dhruv Sheth MD, MS, Child & Adolescent Psychiatry Senior Lecturer, University of Mumbai, India
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**23rd April 2019, Tuesday at Parisar Asha, Santacruz West**

<b>Demystifying Education Today</b> Dr. Samir Dalwai MD, MS, Child & Adolescent Psychiatry Senior Lecturer, University of Mumbai, India	<b>Learning from Differences in the classroom</b> Ms. Anshwika Bhangoo Assistant Head, New Horizons Institute
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**24th April 2019, Wednesday at Parisar Asha, Santacruz West**

<b>Academic Milestones</b> Dr. Tarun Prasad Assistant Professor, New Horizons Group	<b>Handling Anxiety, Depression &amp; Stress</b> Ms. Shweta Parati Group Psychologist, Parisar Asha Ms. Ketaki Gokhale Group Psychologist, Parisar Asha
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**25th April 2019, Thursday at New Horizons, Goregaon East**

<b>Theatre in Education</b> Ms. Sapana Acharya Head, Theatre & Education & Performance Development, Parisar Asha Ms. Nitesh Pandey Senior Teacher, Parisar Asha, Mumbai, India	<b>Effective Communication</b> Ms. Sandhya Kulkarni Assistant Head, Parisar Asha
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**26th April 2019, Friday at New Horizons, Goregaon East**

<b>Every Child Can Do Better!</b> Dr. Samir Dalwai MD, MS, Child & Adolescent Psychiatry Senior Lecturer, University of Mumbai, India	<b>Universal Teaching Strategies</b> Ms. Anshwika Bhangoo Assistant Head, New Horizons Institute
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**27th April 2019, Saturday at Parisar Asha, Santacruz West**

<b>Innovative Leadership</b> Ms. Anjali Savur CEO, Parisar Asha	<b>Teaching English? Problems &amp; Solutions</b> Ms. Manisha Malpe Head of Training Centre, Parisar Asha
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For Registration: (91 22) 2612 4442 / 2612 0070 / 9820955057  
email: info@parisarasha.com

Parisar Asha, Centre for Educational Research and Training  
111/112, Swarna Mitra, Sakinaka Road, C-18, 2<sup>nd</sup> Floor, Sakinaka, Goregaon East, Mumbai - 400 074, India

New Horizons, Child Development Centre  
Sanku, Marolli, 2<sup>nd</sup> & 3<sup>rd</sup> Floor, Parel Road, Sakinaka, Goregaon East, Mumbai - 400 074, India

Rs. 1500/- per participant, per Workshop  
Lunch will be provided  
**50% discount** for Parisar Asha & New Horizons participants



Dr Samir Dalwai and his team conducted a full week of a series of workshops - Educators Excellence Week- for teachers in and around Mumbai with 2 workshops everyday on varied topics that concern children and education! About 210 teachers participated. Half were held at New Horizons Institute of Education and Research and half at Parisar Asha, an NGO.



## Across the Country



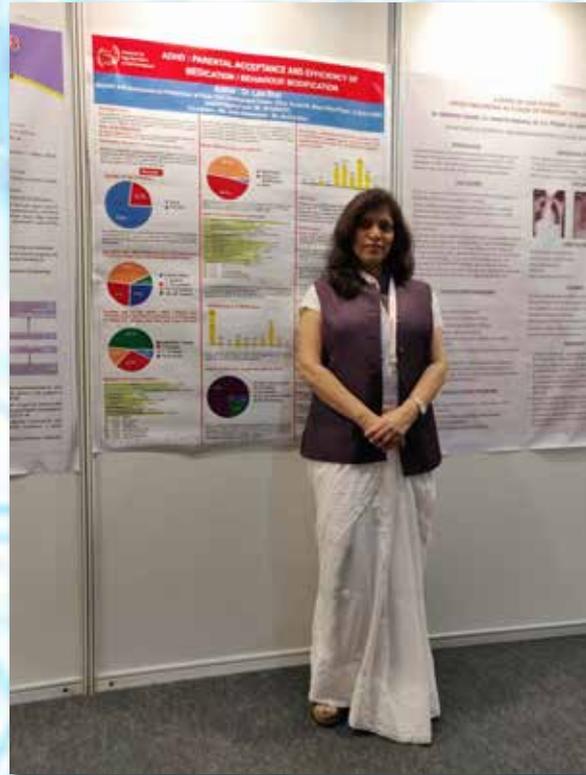
Dr Shambhavi Seth was invited for a presentation on approach to poor scholastic performance- for Pediatricians at IAP Delhi event in association with BLK Super Speciality Hospital .



Dr Chhaya Prasad and her team at ASHA at a Govt School conducted free Educational and Health Camp. Children who did not fair well in the exams and teachers suggested they had behaviour concerns were called with families. Many children with undetected learning disability are found in higher classes.



## Awards & Media



Dr Lata Bhat win the best poster award in the Central zone Pedicon on 20th April 2019

**THE TIMES OF INDIA**

**Mumbai, stop those dangerous train selfies, now!**

avoided at all costs."

**'IF YOUR ONLINE 'LIKES' DETERMINE YOUR SELF-WORTH, YOU ARE HOOKED ON TO ENDLESS SELFIES'**

In a world governed by social media, peer pressure can be toxic. Says Dr Samir Dalwai, developmental pediatrician, Indian Academy of Pediatrics, "We now see four-year-olds taking selfies all the time. Trouble is, if you start at this age, it can get addictive, just like the habit of smoking. It becomes difficult to get rid of this habit, which grows into the teen years." He elaborates further, "The selfie is trying to show the world, 'the beautiful me', where one is trying to get appreciation from others. In an increasingly isolated world, devoid of human connect and social commun-

cation, if the 'likes' on your social media accounts determine your self worth, you get hooked on to endless selfies. Once in a while if you wear a nice shirt and take a photo it's fine, but if you get atop a train for a selfie, it's being reckless." He highlights another hidden danger. "When you just lean out of a train, you may see a pole near you, but when you are taking a selfie you are shutting off all your danger antennae. While taking the picture, you don't realise how far out of the edge you may have gone. Similarly, the boy who just got burned may not have noticed the electrical wires that he touched, as his attention was diverted to the phone."

**'KIDS WANT TO SAY HOW THEY ARE DIFFERENT OR MORE DARING THAN OTHERS'**

**TELANGANA: 19 STUDENTS COMMIT SUICIDE**

**GET involved ON MIRROR NOW**

Amrit Singh @Amrit Singh, what kind of education reforms we can expect so that such incidents could be avoided?

Prithika Sinha Our educational institutions must set up surveillance measures for students @Prithika Sinha

Thu 25 Apr 08:23 pm

614 MIRROR NOW - ₹5 2.00

DAILY DIRECT FLIGHTS FROM MUMBAI

INDORE 3999

The Urban Debate 08:00 pm - 09:00 pm

The Urban Debate 09:00 pm - 10:00 pm

Other Genres Morts

Language

8:23 PM

Media coverage by Dr Samir Dalwai on dangerous 'selfie' fever and teenage suicides