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As COVID-19 ravages human lives and economies, India with 17,50,723 cases and 37,365 deaths (as on Aug 1, 2020) is one of the most affected nations. It is however, some consolation that India has one of the lowest fatality rates in the world. India's total COVID-19 recoveries has crossed the milestone of 10 lakh. The Case Fatality Rate is progressively falling and currently, it is 2.28%.

In India, the process of Unlock 3 started from August 1, wherein more activities reopen in areas outside containment zone, and the lockdown in containment zone extends up to August 31, 2020

Prime Minister Narendra Modi launched high throughput COVID-19 testing facilities on July 27 via video conferencing. These facilities will ramp up testing capacity in the country and help in strengthening early detection and treatment, thus assisting in controlling the spread of the pandemic. These three high-throughput testing facilities have been set up strategically at ICMR-National Institute of Cancer Prevention and Research, Noida; ICMR-National Institute for Research in Reproductive Health, Mumbai; and ICMR-National Institute of Cholera and Enteric Diseases, Kolkata, and will be able to test over 10,000 samples in a day. The labs are enabled to test diseases other than COVID as well, post the pandemic and will be able to test for Hepatitis B and C, HIV, Mycobacterium tuberculosis, Cytomegalovirus, Chlamydia, Neisseria, Dengue, etc.

The third and final phase of human trials of the Oxford-Astrazeneca COVID19 vaccine commenced at 5 sites across India. Serum Institute of India selected by University of Oxford & its partner Astrazeneca to manufacture the vaccine once it is ready.

Our Current issue of PRISM contains three articles. The first article 'SARS-CoV2 is a Chimera with HIV Gene Manipulation' analyses several studies which indicate the possibility that SARS-CoV2 was manipulated in a laboratory. The next article talks about the importance and need of including animal care and safety of animals while planning for disaster resilient smart cities. The third article in Hindi language explains a hidden handicap 'Specific Learning Disability.'

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SARS-CoV2 is a Chimera with HIV Gene Manipulation

Several Studies from January to May 2020 reveal the possibility that SARS-CoV2 was manipulated in a laboratory

— Vaishali Basu Sharma

Is the novel coronavirus a Bioweapon, created and released from a lab? Like Stephen King's illusory flu 'Captain Trips' in 'The Stand'? Is it a fanciful theory that the originally-christened 2019-nCoV might be derived from genetic manipulation or worse for the purpose of use as a bioweapon? Gradually, scientific evidence for the non-natural origins of SARS-CoV2 are emerging from several universities around the world, and offer credibility to the hypothesis that COVID-19 was caused by a virus that was in all likelihood manipulated and created in a laboratory.

The novel coronavirus in humans, first discovered in Wuhan, China, in December 2019, was initially named 2019-nCoV and then designated as SARS-CoV-2 due to its taxonomic and genomic relationships with the Severe Acute Respiratory Syndrome (SARS)-causing coronavirus.

The SARS virus of 2003 went through various pathways of evolution or manipulation. Coronaviruses can spread in humans, other mammals, and birds, and cause diseases of the respiratory, intestinal, liver, and nervous systems. There are seven types of human coronaviruses (HCoVs), including 2002 SARS-CoV, 2012 MERS-CoV, and the most pathogenic of all - the 2019 SARS-CoV-2.

Demonstrating the ease of engineering a virus in a laboratory, Swiss virologist Volker Thiel succeeded in reconstruction of SARS-CoV2 or a clone using a synthetic genomics platform. This creation is a marker for how easy it is in these modern times to pluck a string of nucleotides from a sequence and plant them onto another. Such expertise in the hands of terrorists or rogue states raise serious concern amongst national security establishments across the world.

In 2013, Shi Zhengli (or now infamous as 'Bat Woman') of the Wuhan Institute of Virology and Peter Daszak (Eco Health Alliance; USA) in association with the Chinese and US Governments, published a Study that demonstrated the creation of a Spike protein, with a unique cleavage, the kind found in SARS-CoV2. According to this study replacing the RBD (Receptor Binding Domain) of one SL-CoV Spike protein with SARS-CoV S conferred the ability to use human angiotensin converting enzyme II (ACE2) and replicate efficiently in mice - a clear statement on lab-origin of the zoonotic nature of the virus.

Within two years, in 2015, the same set of Chinese and US scientists, Shi Zhengli and Peter Daszak, including Ralph S. Baric (USA; University of North Carolina), once again with funding from US and Chinese Governments, used the above Spike protein to artificially create a coronavirus that scientists call "a chimeric virus", essentially a clone - one that is manufactured in a laboratory. This virus, christened SHC014, was demonstrated to efficiently infect a mammalian lung. This research done in conjunction with the University of North Carolina concluded in November 2015 - SARS-like virus could jump directly from bats to humans and there was no treatment that could help. It stated that, "to examine the emergence potential (that is, the potential to infect humans) of circulating bat CoVs, we built a chimeric virus encoding a novel, zoonotic CoV spike protein - from the RsSHCO14-CoV sequence that was isolated from Chinese horseshoe bats - in the context of the SARS-CoV mouse-adapted backbone."

Scientific literature is replete with several research papers on the creation of chimeric viruses in the pursuit of discovering and creating deadlier viruses than those that exist in nature. Such research is referred as Gain of Function (GoF) research and is meant to create more virulence in order to be prepared with a cure (therapeutic or vaccine) in the event that such a virus appears or is released by an enemy agent or state.

Understanding the danger of such research, and interestingly for security czars, Shi and Baric had warned, "These data and restrictions represent a crossroads of GOF research concerns; the potential to prepare for and mitigate future outbreaks must be weighed against the risk of creating more dangerous pathogens".

Given its deadly implications, the Obama administration, following several accidents at its GOF research facilities like Fort Detrick, Maryland, placed a ban on Government funding for such research in 2014, only to be reversed by the Trump administration in 2017. There are no records of whether China has ever allowed or disallowed GOF research. Nonetheless the co-authorship of Shi Zhengli in published GOF research does provide evidence of Chinese participation in creating chimeric viruses at least for the past decade.

Detailed review of published science from January onwards reveals that there are three distinct features in SARS-CoV2, which have enhanced its virulence, its transmission to humans and its reduction in human immune response.

A unique feature is the presence of elements of HIV in the virus. Chinese researchers in March 2020 revealed that "viral protein encoded from open reading frame 8 (ORF8) of SARS-CoV-2, which shares the least homology with SARS-CoV among all the viral proteins, can directly interact with MHC-I (Major Histocompatibility Complex Class 1) molecules and significantly down-regulates their surface expression on various cell types", clearly indicating the presence of immuno-depressing features. According to Professor Ruan Jishou who led the team at Nankai University in Tianjin and discovered this new property of the SARS-CoV-2, this suggested that 2019-nCoV coronavirus may be significantly different from the SARS coronavirus in the infection pathway and "has the added potency of using the packing mechanisms of other viruses such as HIV." The Nankai Study had also indicated, "The infection mechanism of 2019-nCoV may be changed to being more similar to those of MHV (Mouse Hepatitis Virus), HIV, Ebola virus (EBoV) and some avian influenza viruses, other than those of most other Beta coronavirus (e.g.SARS coronavirus)".

Some other reports revealed that patients who died from COVID-19 had suffered cellular damage similar to HIV and that SARS-CoV-2 attacks the immune system's T lymphocytes just as HIV does. T lymphocytes, or T cells, are key for identifying and eliminating pathogens in the body. They work by identifying a cell infected by a pathogen and injecting it with toxic chemicals. A unique structure is that the Spike protein fuses the virus and T cell allowing the virus to enter the T cell, take over its behavior, switch off its normal pathogen-fighting functions, similar to the manner HIV replicates inside T cells.

It is no surprise therefore that HIV protease inhibitor Lopinavir-Ritonavir combination has proven to be effective in treating COVID-19 patients, though WHO for unknown reasons has not clarified the matter.

A second unique parameter of SARS-CoV-2 is that it attacks human cells by binding a 1000 times more efficiently with ACE2 receptors found on human cell membranes on account of a unique cleavage in its Spike protein, which allows the furin enzyme in human cells to bind efficiently.

2019-nCoV uses the same cell entry receptor, ACE2, to infect humans, as SARS-CoV. But ACE2 protein does not occur in large quantities in healthy people, and this partly helped to limit the scale of the SARS outbreak of 2002/2003 which infected close to 8,000 people globally. The key reason for doctors advising those with cardiac and blood pressure issues to be more careful is that both these diseases enhance the presence of ACE2 receptors in patients, hence making them prone to contracting SARS-CoV2.

Research indicates that SARS-CoV2 is based on the ancestral bat strain RaTG13, in which the receptor binding motif (RBM) in its Spike protein is replaced by the RBM from an animal strain, and in addition, a small but very special stretch of 4 amino acids is inserted, which creates a furin cleavage site that, as virologists have previously established, significantly expands the "repertoire" of the virus in terms of whose cells it can penetrate.

Virologists have done many similar things in the past - both replacing the RBM in one type of virus by an RBM from another, or adding a new furin site that can provide a species-specific coronavirus with an ability to start using the same receptor (e.g. ACE2) in other species. In fact, scientists were creating chimeric viruses as far back as 2007 and as recently as 2017, when they created 8 new chimeric coronaviruses with various RBMs.

In 2019 such work was in full swing, as the Wuhan Institute was part of a $3.7 million NIH (USA's National Institute of Health) grant titled 'Understanding the Risk of Bat Coronavirus Emergence'. Under its auspices, Shi Zhengli co-authored a 2019 paper that called for continued research into synthetic viruses and testing them.

A third unique feature of SARS-CoV2 is the fact that it appeared out of nowhere, unlike normal coronaviruses, which have animals as their natural hosts and then mutate over several years for zoonotic transmission to humans. In fact Australian scientists in May 2020, noted that there was no sign that the same virus was to be found in other animals. It stated, "SARS-CoV2 Spike protein had the highest overall binding energy for human ACE2, greater than all the other tested species including bat, the postulated source of the virus. This indicates that SARS-CoV2 is a highly adapted human pathogen. Of the species studied, the next highest binding affinity after human was pangolin, which is most likely explained by a process of convergent evolution. Binding of SARS-CoV2 for dog and cat ACE2 was similar to affinity for bat ACE2, all being lower than for human ACE2, and is consistent with only occasional observations of infections of these domestic animals. Overall, the data indicates that SARS-CoV2 is uniquely adapted to infect humans, raising questions as to whether it arose in nature by a rare chance event or whether its origins lie elsewhere."

Another study by Canadian researchers in May 2020 revealed that, "SARS-CoV-2 appeared without peer in late 2019, suggesting that there was a single introduction of the human-adapted form of the virus into the human population. This has important implications regarding the risk of SARS-CoV-2 re-emergence in the near future and the severity of its consequences".

The above three unique features in SARS-CoV-2, coupled with the fact that US and Chinese researchers had been conducting GOF research for several years, does indicate the higher probability of the source of the current pandemic to be laboratory-made or -modified.

Two of the above unique features were first pointed out in a study published on January 31, 2020 by a group of researchers at IIT Delhi and Delhi University, titled 'Uncanny similarity of unique inserts in the 2019-nCoV spike protein to HIV-1 gp120 and Gag.' Oddly, the study was withdrawn by the authors on the count that it hadn't been peer-reviewed. However, the server on which it was published, biorxiv.org, is by definition meant for non-peer reviewed papers, which invite peers to review. It is known that these researchers were harassed by hundreds of emails from unknown persons critiquing them for a hasty conclusion.

However, subsequent research from various universities, including those discussed in this piece, have confirmed the presence of four unique inserts in the Spike protein as well as similarities with the HIV genome, thereby proving that the Delhi research had shown the right direction to COVID-19 science and that too, one day prior to WHO declaring the outbreak to be a pandemic. The Study had concluded, "This uncanny similarity of novel inserts in the 2019-nCoV spike protein to HIV-1 gp120 and Gag is unlikely to be fortuitous in nature."

The abundant body of scientific research on Gain of Function and creation of chimeric viruses appears to be a neglected section of academic work in India. Lab-engineered viruses are a serious new concern for national security. While India does have the Weapons of Mass Destruction Act 2005 to deal with biological agents, security agencies would do well to associate with scientific establishments and understand this new threat. The fact that Shi Zhengli, the Bat Woman, had co-authored research on bats in Nagaland, as recently as 2019, should have been a red flag and prompted heightened oversight.

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Making Animals in Smart Cities Disaster Safe: A View

— K M Singh

The Smart City Mission was launched in India by Prime Minister Narendra Modi on 25th June 2015. This mission envisages having the entire echo system in the selected cities within the framework of comprehensive development with sustainable infrastructure characterised by inclusivity. India is primarily an agrarian country where animals are an integral part of human life not only in rural areas, but also in cities. They are closely linked to day to day life of people even in cities, be it for security or companionship (dogs) or availability of dairy products (cows & buffaloes) or food (goats & poultry etc). So, if inclusivity and comprehensive development are the stated missions of smart cities, it should cover all lives including urban animals. Significantly, the Smart City Mission has no mention of animals or livestock. Among all animals, canine is one which cannot be excluded from urban life. In India most animal bites (91.5%) are by dogs of which 60% are stray dogs (NCBI).

Piecemeal initiatives to control the dog population in some of the cities have shown good results. This programme was initiated in Jaipur in 1994 with over 65% street dogs sterilised resulting in decline of dog population by 28%. Similarly, Chennai witnessed drastic reduction in dog bites from 120 to in 1996 to 5 in 2004 (Dr Krishna SC, 2010). Jodhpur City dog population dropped by 40% within 3 years (Tottenham, 2009). To take care of this menace, Animal Birth Control (ABC) programme was formally notified in 2001. However, this programme has been a victim of ineffective implementation. Another major problem is stray cows in the cites. Recently, Surat Municipal Corporation has taken an initiative of putting tags in the ears of animals with a registered number which is linked to the Aadhar cards of the owners. This process helps in identifying the owner of the stray cattle.

Considering the relevance of animals in our day to day life in the Indian context, the importance and need of including animal care and safety of animals while planning for disaster resilient smart cities cannot be ignored. This issue would call for a visionary and comprehensive approach in planning of smart cities. This would include having a policy, an institutional mechanism, requisite infrastructure besides capacity building and awareness generation measures.

The broad framework of smart cities should have a well-considered policy to address issues of both community ownership and pet ownership. The policy may prescribe the number of animals that can be owned as pets and also procedure to be followed for community animals in designated areas. As regards implementation of the policy, there would be a need to establish an institutional mechanism to effectively plan, implement and monitor. It should also ensure enforcement of Animal Welfare Acts and Rules in smart cities with online tracking mechanism.

High vulnerability of many of our cities like Mumbai, Chennai, Srinagar, and Patna etc from urban flooding was exposed in recent years. Death of a large number of animals in these floods causing contamination of water and diseases has to be factored in planning of smart cities. It would call for requisite infrastructure in terms of construction and maintenance of safe emergency shelters along with identified evacuation routes to strategic locations for public to safely evacuate along with animals in emergency situations.

The need of appropriate capacity building in this field in the framework of smart cities may be equally important. It would include appointment and training of adequate human resources to periodically asses, treat, monitor, document and report on the health and welfare of animals and related diseases affecting both animals and people.

To conclude, it may be relevant to quote Mahatma Gandhi: "the greatness of a nation and its moral progress can be judged by the way in which its animals are treated"

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स्पेसिफिक लर्निंग डिसेबिलिटी : एक छुपी हुई दिव्यांगता (Specific Learning Disability: a hidden handicap)

— Seeta Kumari

वर्तमान में सभी के लिए शिक्षा के प्रयास के तहत स्पेशल एजुकेशन के कांसेप्ट को बल मिला है, लेकिन लोगों में अभी भी जागरूकता की कमी है। स्पेशल बच्चे कौन है और डिसेबिलिटी के कितने प्रकार हैं आदि के बारे में लोगों को जानकारी ही नहीं है या फिर कम जानकारी है। शारीरिक विकलांगता को देख कर फिर भी पहचाना जा सकता है लेकिन मानसिक मंदता (Mental Retardation) और लर्निंग डिसेबिलिटी से लोग अब भी अनजान है।

आसान शब्दों में समझा जाये तो लर्निंग डिसेबिलिटी दो अलग–अलग शब्दों लर्निंग और डिसेबिलिटी से मिलकर बना है, लर्निंग शब्द का मतलब है सीखना तथा डिसेबिलिटी से मतलब है कमी अर्थात सीखने की एबिलिटी में कमी है। सीखने की कमी एक न्यूरोलॉजिकल यानि तंत्रिका तंत्र से जुड़ी प्रॉब्लम है जो संदेश भेजने, ग्रहण करने और उसे प्रोसेस करने की मस्तिष्क की क्षमता या योग्यता को प्रभावित करती है। सीखने की कमी से जूझ रहे बच्चे को पढ़ने, लिखने, बोलने, संवेग, समझने, गणित के सवाल और फ़ॉर्मूला को समझने, तर्क और सामान्य कॉन्सेप्ट्स आदि को समझने में समस्या आ सकती है। कई बार देखा गया है कि लर्निंग डिसेबिलिटी के साथ–साथ बच्चों में ADHD (Attention Deficit Hyperactivity Disorder) 12% से 24% तक पायी जाती है।

लर्निंग डिसेबिलिटी के इतिहास ने अपना वर्तमान स्वरुप ग्रहण करने के लिए एक लंबा सफर तय किया है। सबसे पहले इसका प्रयोग 1963 ई. सैमुअल किर्क ने किया था। आज इसे स्पेसिफिक लर्निंग डिसेबिलिटी के नाम से जाना जाता है क्योंकि इसमें कोई एक विकार (Disorder) न होकर यह विकारों का समूह है।

लर्निंग डिसेबिलिटी किसी भी प्रकार का सुनने, देखने की प्रॉब्लम, मानसिक मंदता (Mental Retardation), आटिज्म (Autism), बिहेवरल (Behavioural) समस्या नहीं है। बल्कि सीखने की यह समस्या कई कारणों से होती है जैसेः आनुवंशिकी (Genetics), पर्यावरणीय (Environmental) और जैविक (Biological) कारण है।

लर्निंग डिसेबिलिटी के प्रमुख प्रकार :

डिस्लेक्सिया (Dyslexia) : पढ़ने से जुड़ी समस्या (शब्दों को रुक–रुक कर पढ़ना, आवाज़ में अंतर ना कर पाना, शब्दों का हेर–फेर या छोड़ना, शब्दों को पहचानने–पढ़ने में दिक्कत, स्पेलिंग में दिक्कत आदि)

डिसकेलकुलिया (Dyscalculia) : गणित से जुडी समस्या (अंकों का हेर –फेर, अंकों–प्रतीकों को पहचानने, गणितीय कांसेप्ट, संकेतों को, जोड़ने–घटाने में गलती, दाएं बाएं में, फ़ॉर्मूला आदि को याद करने में समस्या, इक्वेशन को क्रमवार हल करने में समस्या आदि)।

डिसग्राफिआ (Dysgraphia) : लिखने से जुडी समस्या (अक्षरों को टेढ़े–मेढ़े बनाना, वर्तनी अशुद्धि, पेन को अजीब ढंग से पकड़ना या पकड़ने में दिक़्क़त, लिखते वक्त हाथ में दर्द की शिकायत करना, लिखते वक्त जरूरत से ज्यादा झुक कर लिखना आदि।)

डिस्प्रेक्सिआ (Dyspraxia) : बच्चे को फाइन और ग्रॉस मोटर स्किल में समस्या होती है, जैसे पेंसिल, कैंची, बॉल आदि पकड़ना, चित्र बनाना, बटन बंद करना, आँखों और हाथों के कोआर्डिनेशन में समस्या आदि।

ऑडिटरी प्रोसेसिंग डिसॉर्डर (Auditory Processing Disorder) : आवाज़ को सुनने व अंतर करने में दिक्कत, गद्य व भाषा आदि में दिक्कत।

विजुअल प्रोसेसिंग डिसॉर्डर (Visual Processing Disorder) : चित्रों, प्रतीकों, मानचित्रों आदि को समझने में समस्या आदि।

लर्निंग डिसेबिलिटी को आमतौर पिछड़े बालक (Backword Child), स्लो लर्नर (Slow Learner) अथवा मानसिक मंदता (Mental Retardation) समझ लिया जाता है पर यह इन तीनों से ही अलग् समस्या है। तथा इनकी परिभाषा इस अंतर को समझने में मदद करती है। इन बालकों का प्फ औसत या औसत से अधिक होता है जबकि उपरोक्त में औसत से कम होता है। इस डिसेबिलिटी की वजह से बच्चे को आलसी, नालायक, बुद्धू, बेवकूफ आदि कह कर बुलाया जाता है। जिसका उनकी मानसिकता (Mentality) पर गहरा नकारात्मक प्रभाव पड़ता है जिस की वजह से आमतौर पर या तो स्कूल इन्हें मजबूर करता शिक्षा छोड़ने पर है या वह स्वयं ही स्कूल छोड़ देते है। भारत में अभिषेक बच्चन, और बोमन ईरानी जैसे मशहूर कलाकार भी इस डिसेबिलिटी से पीड़ित है परन्तु इन्होंने अपनी भीतर की क्रिएटिविटी को उभार कर समाज में अपनी नई पहचान बनाई है।

भारत में इस संबंध में कार्य शुरू हुए अभी बहुत कम समय हुआ है क्योंकि शुरुआत में ही इसे भारत में पश्चिमी देशों की अंग्रेजी भाषा से जुड़ी समस्या के रूप में देखा जाता था लेकिन धीरे–धीरे भारत में भी जागरूकता बढ़ रही है। आज़ादी के बाद से ही, भारत में इंक्लूसिव एजुकेशन के क्षेत्र

में समय के साथ कई प्रोग्राम, नीतियां, क़ानून व योजनाएं बनाई है; जिसमें कोठारी कमीशन की रिपोर्ट, सर्व शिक्षा अभियान (SSA), पी डब्लू डी कानून (PWD), विकलांग व्यक्तियों के अधिकार विधेयक (RPWD) आदि है। वर्तमान भारत में सरकारी और गैर–सरकारी संस्थाएँ (NGO's) इस क्षेत्र में कार्यरत हैं।

भारत में लर्निंग डिसेबिलिटी से ग्रस्त बालकों के आकड़ों की बात करें तो ठीक–ठाक आंकड़ें बताना मुश्किल कार्य है, क्योकि इसपर काम शुरू हुए अभी बहुत कम समय हुआ है। चेन्नई में आयोजित सम्मेलन लर्न 2012 में विशेषज्ञों ने कहा कि भारत में लगभग 10% बच्चे लर्निंग डिसएबल (टाइम्स ऑफ़ इंडिया, जनवरी 27,2012) हैं। एक रिसर्च के अनुसार भारत में 1% से 19% फीसदी बच्चे लर्निंग डिसएबल (अप्रैल 2018) है। एक अन्य रिसर्च के अनुसार, भारत 56% अध्यापकों को इस डिसेबिलिटी के बारे में पता ही नहीं है, और केवल 2% अध्यापकों के पास ही अच्छी समझ है। एक अन्य रिसर्च के अनुसार, पर्यावरणीय कारणों की वजह से हर साल अधिगम अक्षम बच्चों की संख्या 10% बढ़ रही है। इसके लिए जरूरी है कि भारत में बड़े पैमाने पर, इस क्षेत्र में जागरूकता व रिसर्च वर्क की जाएँ।

आमिर खान की फिल्म "तारे जमीन पर" जिसने इस समस्या को बड़ी ही संवेदनशीलता (Sensitivity) के साथ आम जनता तक पहुंचाया परन्तु इस फिल्म के 9 साल बाद लर्निंग डिसेबिलिटी को "विकलांग व्यक्तियों के अधिकार विधेयक" (Rights of person with Disability Act) 2016 में क़ानूनी मान्यता मिली। (इस विधेयक ने सरकारी नौकरी में 4% आरक्षण, संरक्षकता, वित्तीय सहायता प्रदान करने के लिए स्टेट सेंटर फण्ड, 6 और 18 वर्ष मुफ्त शिक्षा का अधिकार, शिकायत निवारण एजेंसी, परीक्षा के दौरान केलकुलेटर का इस्तेमाल, राईटर उपलब्ध करना, डिसेबिलिटी सर्टिफिकेट सुविधा आदि जैसे प्रावधान है)।

भारत में प्राचीन काल से ही शिक्षा का महत्व देखने को मिलता है, जैसे गुरुकुल प्रथा, मेकाले की शिक्षा नीति व राष्ट्रीय सुरक्षा में शिक्षा का महत्व या फिर विष्णु शर्मा द्वारा रचित पंचतंत्र में समावेशी शिक्षा का आधार, इसी के महत्त्व को देखते हुए भारत ने 86वां संशोधन के द्वारा शिक्षा को मौलिक अधिकार घोषित किया था। इसलिए समय कि मांग को देखते हुए भारत में नई शिक्षा नीति (2019) को लागू किया गया है, (विशेष स्कूल व ओपन स्कूल, चिकित्सक व विशेष शिक्षक की नियुक्ति, छात्रवृति, आईसीटी (ICT) का प्रसार, स्कूल की पाठ्यचर्या व शिक्षणशास्त्र का पुनर्गठन तथा टीचर्स के भी पाठ्यचर्या की व्यवस्था, शिक्षा से जुड़े विभिन्न मंत्रालयों, विभागों व आयोगों, के बीच समन्वय आदि के प्रावधान है) और जिसे हाल में ही केबिनेट में मंजूरी भी मिल चुकी है ।

इस डिसॉर्डर के कारणवश बच्चा स्कूली शिक्षा के साथ–साथ व्यवसाय में भी पिछड़ जाता है। जागरूकता के कमी के कारण कुछ बच्चों में इस समस्या का जीवनभर पता नहीं चलता अतः जरूरत है कि सबसे पहले माता–पिता और सामान्य अध्यापक को भी इस डिसेबिलिटी का ज्ञान कराया जाएँ क्योंकि यही बच्चे की वृद्धि और विकास (Growth and Development) के चरणों को सबसे करीब से देखते है और असामान्यता को पहचान सकते है। वर्तमान में लॉकडाउन जैसी स्थिति में अति गंभीर लर्निंग डिसेबल्ड बच्चों को बिना स्पेशल टीचर के घर पर रखना, अचानक रूटीन लाइफ में बदलाव, आर्थिक समस्या और विशेषज्ञों की अनुपस्थिति ने परिवारों की मुश्किलों को और बढ़ाया है। भविष्य में खासकर इन बच्चों के माता–पिता को ऐसी आपातकालीन समय के लिए ट्रेनिंग देकर तैयार कराया जाएँ ताकि वह बच्चों को घर पर संभाल सकें तथा इन बच्चों के लिए इंटरनेट भी कोई खास भूमिका नहीं निभा पा रहा है। अतः सरकार को भविष्य में इसके लिए वैकल्पिक सुझावों के लिए भी तैयार रहना होगा।

स्पेसिफिक लर्निंग डिसेबिलिटी के क्षेत्र में अभी भी जागरूकता, सही वक्त पर पहचान, लर्निंग डिसेबिलिटी के लिए राष्ट्रीय नीति, विशेष स्कूलों का निर्माण, प्रशिक्षित अध्यापकों की नियुक्ति, टेलेंट पहचान, वोकेशनल कोर्सेज, सरकार और गैर सरकारी संगठनों की एक्टिव भागीदारी, नीति निर्माण में इनकी भागीदारी तथा स्पेशल सेल की स्थापना की जरूरत है तथा सबसे जरुरी है, कि बच्चों की जरूरत व सीखने के तरीके के अनुसार के अनुसार टूल्स, तकनीक, स्ट्रैटेजी व इंटरवेंशन को अपनाकर उसे शिक्षा प्रदान कराई जाये।

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