

Presidential Address Delivered by Dr. Deepak Gupta
'Technology and Mental Health: Application in Child Mental Health'

Delhi Psychiatric Society (DPS) – Silver Jubilee Anniversary

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Respected Dignitaries on the Dias, our chief guest Shri Satyender Ji, Health Minister, Govt of Delhi, DPS Patron Dr Bohra, my friend and past president Dr Manish Kansal, all the senior faculty members, my teachers, executive council members, and my dear colleagues and friends, Good evening.

It is indeed a pleasure and honor to be here and deliver my presidential address in front of this esteemed august gathering at the Silver jubilee Annual Conference of Delhi Psychiatry Society (DPS) as we enter the 25th celebratory Year 2015-2016. My association and Journey with Delhi Psychiatric Society goes back to the year 2000 when I become a DPS member. I fondly look back at those days when I was a senior resident working at GB Pant Hospital with Prof Agnihotri and Prof Jiloha. My journey continued to become a DPS Joint Secretary year 2007-2009 and later General Secretary for the year 2009-2012 followed by becoming a vice president in 2012-2014 and last year DPS President. I am highly blessed to have the support and guidance from the Past Presidents Dr. Jiloha, Dr Wadhawan, Dr Ashwani Kumar, Dr Manish Kansal and all the executive council members over the years. Thank you all very much.

The theme of this Silver Jubilee Annual Conference is **“Technology and Mental Health”** - Applications of technology in the Mental Health Services.

Technology is an inescapable part of our lives today. Man has computers which excel the mathematical efficiency of the human brain a hundred times; has built faster-than-the-speed-of-sound airplanes and spaceships, has been able to connect people living 10,000 kms away by the touch of a button...making the world a global village. Technology has penetrated every aspect of our lives... our brains are getting rewired with techno culture. Just last Midterm CME we spoke about various behavioral addictions with Internet addictions being on the rise. Very recently, India's first internet de-addiction center has also opened by NIMHANS Bangalore followed by Delhi. However, No matter which side of the coin we look at; today's man cannot go unaffected by technology, the good news is that **there seems to be a positive side to it as well...**

This is the purpose for the current theme – TECHNOLOGY and MENTAL HEALTH. As a practicing child and adolescent psychiatrist for more than a decade, I would like to take the opportunity in my presidential address to highlight Applications of Technology in the Mental Health Science focusing on child and adolescent mental health.

The hands and reach of technology is far and wide with immeasurable power. It is up to us to be able to use this in the most efficient way in order to deliver the most effective services for mental health. Yes technology has brought health including mental health on a global platform. But let's go back a little bit and review the starting of this revolution. The word TELEPSYCHIATRY was first used in an article by Dwyer in 1973. According to the APA in 1998, tele-psychiatry is "the use of electronic communication and information technologies to provide or support clinical psychiatric care at a distance". Further, it has also been referred to as 'e-mental health' which is the use of information and communication technologies to support and IMPROVE mental health, including the use of online resources, social media and smart phone applications.

Therefore, any service provided at a distance through the use of technology becomes tele-psychiatry...any service which is used to **support and improve mental health services**.

From this, the question might arise as to what is the need for technology to support and improve mental health services?

1. First and foremost, **to bridge the gap of services between the metropolitans and rural communities!** I would like to quote Our Hónorable Prime Minister Shri Narendra Modi ji from his convocation at NIMHANS in Feb this year. He said, "superstition often blocked proper treatment and cure for the mentally ill. The field of mental health faces the triple challenge of **agyanta** - lack of knowledge, **ajagrukta** – lack of awareness and **andhshradha** –blind faith.' A 2005 study by the National Commission on Macroeconomics and Health indicated that at least **71 million people in India** have a serious mental disorder. Practicing in a country like India, where majority (**70%** - *Parekh, 2015*) of the population resides in villages and small towns, focussing on only the metropolitan populace does not do justice to our work. In India, Mental health is still considered a taboo and individuals suffering from various disorders are often shunned, without getting sufficient care and knowledge about the same.

In light of the enormous treatment gap, wherein about 76–85% of serious cases of mental illness in less-developed countries are left untreated (*S Malhotra, S Chakrabarti, et al., 2015*), tele-psychiatry, is a promising delivery method to reach millions of individuals in rural & remote India who are unable to access mental health services and whom the mental health system is currently underequipped to serve. Often people come from far off places, looking for hope from us. Technology can help us target such individuals on a regular basis through video conferencing and web therapy – providing useful help. Such platforms can also be utilized to create greater awareness. Once worked on infrastructures, the lack of expertise can be well-managed in a far reaching manner by all of us.

2. **Cost and Time Effective** – this goes without saying that in the fast paced world as ours, time is of the essence. With the use of technology, the world is accessible in the click of a button without leaving the comforts of our workplace. There is ample data supporting the reduction of time and cost aspects while using technology to our advantage. We can also go a step further in saying that with the unpredictable nature of our work, the use of tele-psychiatry is like a pot of gold in times of crisis management – online counselling and suicide interventions can be effectively and successfully administered without losing on precious time.
3. One might question the quality of services provided at various levels of therapy. However, we have Indian as well as international data to support the use of tele-psychiatry at all levels – **Screening and Diagnosis; Intervention as well as regular Follow – ups**. There are diagnostic tools and assessment questionnaires that provide a reliable medium to assess and intervene effectively. The interventions can range from giving home plans, providing tele-medicine and data also supports successfully conduction of group sessions.
4. A **regular feedback** with the families is a viable option even for out of station clients to ensure a speedy recovery process. Web based surveys have shown to provide reliable and cost effective data as the client as well as the therapist has ample time to fill and assess the form. Also, availability and transfer of information, while maintaining confidentiality, is faster. A simple three line email from a therapist makes the client feel that the therapist is present, listening and thinking about them. Such is the power of technology!

Before we move on, I would like to point out two ongoing researches that made me stop and ponder over our conventional methods of treatment. First is an ongoing research by **Dr. Daniel Fung & Ms. Lim Ashworth from Singapore (2012)**. They are in the process of creating a humanoid robot to work with children on the Autism Spectrum Disorder. It is postulated that a robot is a **more predictable medium** and can alleviate a certain level of anxiety and stress related to human interactions for a child with Autism spectrum Disorder – what a marvelous piece of technology – imagine the dramatic paradigm shift in the nature of intervention that can follow with a humanoid robot. The second piece of recent research that caught my fancy was by **Firth & Torous (2015)** about smart-phones as mediums of self regulation in cases of schizophrenia. At first, this seemed to be contradictory to the symptomology of the disorder, however, studies indicate that the overall retention rate was 92% and patients were adherent to smartphone apps use on average 85% of the time. While the potential benefits of using smartphone technology to enhance care in schizophrenia appears vast, the current evidence base is modest.

Nevertheless, the point I would like to emphasize is that - This is the future – where smartphones and robot are our allies and aid the process of recovery! These are just two studies, I am sure there are many others as well ... We must keep up!

From the future, I would like to move back to the present. I have spoken extensively about the various uses of technology in terms of therapy and management of disorders. However, the reaches of technology extend a little further from that.

Being a practicing child psychiatrist myself, I would like to share a standard working day with you.

I start the morning with an email that reaches me every day around 7:30am enlisting the sessions of the day. My phone calendar helps set reminders and meetings that are beyond my place of practice. On reaching work, I see clients and prescribe them the treatment. With few clicks on my tab, a computerized prescription, mentioning the demographics, diagnosis, improved symptoms, medicine, therapy sessions and date of follow up, comes up which is then printed and given to the family by the time they reach the reception. Along-side, tagging the other therapist involved allows them to view their prescription online and be aquatinted with the case before hand. The payments are all monitored through computer databases which has every client's information. Then from attending families of South Delhi, I can attend to families from Soel Goun in the outskirts of Ahmedabad to a follow up case in

Melbourne; back to back through Skype sessions sitting in my office. On the side, through Whatsapp groups and emails, I am able to access any client or professional as well as maintain a close eye on the workings of the center. The CCTV camera at the waiting area helps me make sure the smooth functioning of all three centers from the accessibility of my phone in the car on the way to a meeting. After sessions, attending a conference or giving a lecture – with just a photo being updated to the Facebook page informs friends and fellow members of my involvement in certain occasions. After a hard day's work, finishing dinner with my family, my laptop and internet allows me the access to the latest developments and researches of the world – again just with multiple clicks.

I am sorry if I remind you of an apple advertisement, but, technology – everyday – helps me further my practice and give effective help.

If I was to broaden the categories that technology helps my centre, Centre for Child & Adolescent Wellbeing (CCAW), New Delhi, they would primarily be the following:

1. **Clinical Services:** While preparing this report, I was amazed to see how the use of technology has rapidly become an entwined part of my practice.
 - a. Services rendered through Skype sessions started at a mere 11 sessions in 2012 that have now grown to 125 sessions in 2015. The clients have ranged from having ASD concerns to emotional disorders for out station across India and NRI clients. 75% client sustainability has been found to have been maintained.
 - b. Teleconferencing for prescription of telemedicine and short consultations as well as online assessment are useful for regular documentation and efficient planning.
 - c. E – Therapy: In individual sessions, use of internet information and child friendly videos are useful therapy tools and are often used. Also, Skype sessions taken on a weekly basis show almost equivalent success as compared to a face to face sessions.
 - d. Captain Log's Mind Power Builder: A unique Computerized Cognitive Restructuring Program that focuses on training various cognitive abilities of individuals, through computer games. In the past 18 months, we have acquired 2 computer units, 71 children and adolescents have been assessed; 32 have graduated, 22 are active and 1 client is also on a cloud licence for online training. In terms of results, **Paper presented at recent IACMH at Pune Nov 2015**, for managing executive functions, this recent study showed improvement in all executive skills with 20 hours of training; with improved hyperactivity in 73% of children and adolescents.

2. The second area where technology has deep roots is our **Administrative work**. From effectively maintaining databases to making calls to receive and confirm appointments, the admin staff is greatly indebted to technology for smooth day-to-day functioning of the center. Going beyond the basics, I would like to point out two aspects where things have become very comfortable for me as a child psychiatrist.
 - a. First are digital prescriptions. For many years, my clients and professionals have been troubled with decoding my handwriting and many friends here would agree. This fascinating application that allows me to tap and select diagnosis and medicines making a digital prescriptions in under a minute. It's wonderful...everyone is visibly happy. Also I am allowed to tag associated professionals who can follow up on the case accordingly.
 - b. Another important software is PRACTO, which has helped revolutionize the appointment protocols and maintain management services.
3. **Resource Material**
 - a. Social Media – It helps to inform others about the happenings at the organization. Provides greater awareness about Child & Adolescent Mental Health through Facebook pages; Allows opportunities for Marketing & Promotion of a new service or events. Helps reaching out to more people and ultimately creates more visibility in the community.
 - b. There is a website that allows access to the services provided as well as allows us to upload the e-books that we have launched at various occasions in the past.
 - c. There are a multitude of apps available – some of which are very diagnosis specific and can aid the process of therapy. Being updated with such apps that are readily available on every electronic device provides help to clients and professionals alike.
 - d. Research – a very important aspect of our work requires us to be updated with the latest findings in the world and review literature for our ongoing clinical researches. The internet also allows us easy access to eminent journal articles that can be implemented in our services.
4. The last aspect which is still an upcoming area where technology has helped touched lives is through **Support Groups** and **Self Help Groups**. We have started groups for parents of Autism and ADHD that use the mediums of Whatsapp groups to communicate. It has been seen that over a period of time, the parents have initiated discussions and have become a support system for each other regardless of regular physical proximity.

While there are many optimistic sides and huge benefits to the use of technology in Mental Health Services, there is no coin which doesn't come with its flipside. Technology can be extremely overwhelming if one is not used to working with it. There is a constant struggle to maintain efficient execution and consistent implementation while maintaining confidentiality – one that I need to be very mindful of. There is also a considerable start up costs involved, where one needs to be aware and updated of the most beneficial option forward for our setups. Technology can also be synonymous to becoming good friends with the IT professionals as one is very dependent on them for smooth functioning of services.

My speech would be incomplete without mention of **ethical guidelines and principles** involved with using technology in mental health set ups. As our work comprises of very sensitive information, maintaining confidentiality to the family becomes the primary priority. Informed consent as well as withholding certain information considering legal matters is important to be acquainted with. Before using technology, protocols for each structure should be established and adhered to. Also, care has to be taken in order to control for misinterpretation of information. I am fortunate that, we have eminent speakers among us who will be shedding greater light on this subject in the due course of our conference.

In conclusion, **I would like to emphasize that Technology brings revolution....with technology we aim for accessibility, availability and affordability for one and for all.** The world is waiting for us to reach out and show our potential, the people are waiting for us to take control of the situation; the families are waiting for us to be their hope and answer their prayers.

I would like to end with Microsoft CEO Satya Nadella's words which resonate with my feelings accurately. He says, 'I'm grounded on the role of technology. Ultimately to me it's about the human capital and the human potential. Technology empowers humans to do great things. You have to be optimistic about what technology can do in the hands of humans.' We are a handful of very powerful human beings – let's use our potential and do 'ground breaking things' with technology in the field of mental health.

Thank you very much for your patience and time!

Jai Hind.....

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