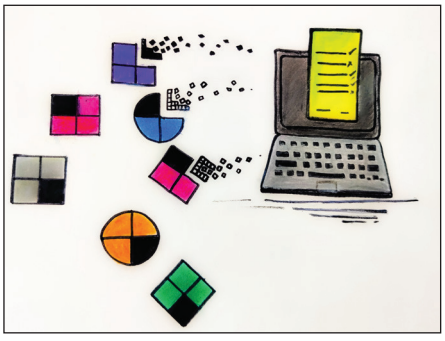
Online Psychological Assessment for Children and Adolescents with Neurodevelopmental Disorders: Exploring New Avenues in Times of Social Distancing

Meghana Vijayanand[1] and Vijaya Raman[2]

The COVID-19 pandemic has had an unprecedented impact on the lives of the entire population. We, the scientific community of the Globe, do not have a reference point in history to see how this will pan out in terms of impact. While the entire world is grappling with the immediate health repercussions of the virus, it is vital to understand the effect it has had on children, and more specifically, children with neurodevelopmental disorders (CND). The mental health community, from apex bodies and professional organizations to private practice stakeholders, has come together to shift psychotherapy online, thus preventing a mental health catastrophe. The Indian Psychiatric Society has released the telepsychiatry operational guidelines, where recommendations for telepsychotherapy have been made.[1] However, efforts to reach out to CND have not been comprehensive.

Neurodevelopmental disorders, namely intellectual and developmental disability (IDD), learning disorders (LD), autism (ASD), attention deficit hyperactivity disorder (ADHD), to name a few, have a prevalence rate of 9.2–13.6% for children aged 2 to 9 years,[2] the absolute number being anywhere between 12.69 crores and 18.76 crores, based on India's population estimates in 2020. Amongst neurodevelopmental disorders, the prevalence of autism is approximately 0.09–0.11%,[3] ADHD is around 7.1%,[4] LD is around 16.49%,[5] and IDD is around 7.14%.[6] CND require regular psychological assessment (PA) to ensure adequate identification and sufficient intervention. In fact, it is recommended that they have an assessment every year to monitor their progress and make plans to address the areas of delay.[7]



The COVID-19 pandemic has been ongoing since 2019, and there is no certainty about the prediction of its end.[8] Two years on, the threat of yet another wave, and the subsequent breakdown of the health system, is impending. PA has been on hold because of parents' worries about exposing the children, safety issues, and because the assessment process is difficult to conduct, keeping in mind the COVID-19 precautions issued by the hospitals, of keeping interaction time-limited and maintaining at least 6 ft distance.

The overall number of parents seeking assessments for their children has decreased,[9] as they do not deem it a medical emergency. The pandemic has made parents extremely wary of coming to hospital settings (or having face-to-face interactions), although many of them understand the need for the evaluation. Additionally, CND also have several

[1]PhD scholar. [2]Professor of Clinical Psychology, Department of Psychiatry, St. John's Medical College, Bangalore, India.

HOW TO CITE THIS ARTICLE: Vijayanand M and Raman V. Online Psychological Assessment for Children and Adolescents with Neurodevelopmental Disorders: Exploring New Avenues in Times of Social Distancing. *Indian J Psychol Med.* 2022;44(2):181–184.

Address for correspondence: Vijaya Raman, Dept. of Psychiatry, St. John's Medical College, Bangalore, Karnataka 560034, India. E-mail: vijaya.r@stjohns.in

Submitted: 27 Sep. 2021
Accepted: 29 Dec. 2021
Published Online: 1 Mar. 2022

ACCESS THIS ARTICLE ONLINE
Website: journals.sagepub.com/home/szj
DOI: 10.1177/02537176211073877

health comorbidities and sensory issues (where mask use may be a challenge) that make the parents' fears legitimate.

The stakeholders need to keep in mind that a child's development is time-sensitive. Simply waiting for the pandemic to ease without offering any input to the child's development is not a viable option. It is time we try to explore the option of online assessments (OA) in a scenario where nothing else is possible.

Traditionally, PA has been bound in rules of administration, and ethics and the universality of the results largely depend on the precise following of the manual. The environment, the confounding factors, and the verbal and nonverbal cues are all tightly controlled. This traditionally sanctioned approach that every clinical psychologist (CP) is trained to hold sacrosanct is challenging to uphold when OA is considered. However, the need of the hour is reaching out to children who need our help. In medicine, it is believed that the benefits should outweigh the side effects. Borrowing that principle from medical science, it seems vital to create avenues for OA.

World over, in several hospitals, clinics, schools, and research facilities, professionals have been exploring OA option to ensure that timely assessments are continued.[10,11] "Teleassessment" is defined by Krach as "diagnostic, PA procedures administered to (an) individual(s) who is not in the same room as the examiner through telecommunication technologies, not limited to telephone conferences, online, videoconferencing, and web-based assessments."[12]

The adaptation of PA to OA has been attempted prepandemic to access children in rural settings and in remote populations, to improve their accessibility to testing.[13–15] Several research studies have also evaluated the utility of OA in various populations involving individuals with cognitive impairment and neurotypicals[13,14,16] and with problems ranging from geriatric issues to intellectual disability.[15] Brearly,[17] Hodge,[18] and Ransom[19] have demonstrated that there is no statistically significant difference in the scores obtained from face-to-face assessment or OA. Some studies have also positively evaluated the legitimacy of diagnosing and assessing children with autism through online techniques.[20]

Additionally, Krach[12] reviewed guidelines issued by several professional ethics governing organizations [American Psychological Association (APA), National Association for School Psychologists (NASP), and test publishing agencies (MHS, PsychCorp, WPS, PAR, and Pearson)], for adapted OA. The interorganizational practice committee (IOPC) was set up as a coalition of major professional organizations like the American Academy of Clinical Neuropsychology (AACN/American Board of Clinical Neuropsychology), American Psychological Association (APA), the National Academy of Neuropsychology (NAN), the American Board of Professional Neuropsychology (ABN), and the American Psychological Association Services (APAS). The IOPC has also come out with guidelines to monitor the practice of teleneuropsychology.[21]

While the governing professional organizations adopted OAs with caution (guidelines mentioned clearly), the test publishers had no objection to adapted OAs. In fact, the Pearson website has a downloadable no-objection certificate to use the copyrighted tests for OA as long as it is not used for mass administration.[22]

Several articles have explored and cautioned the user about the ethical considerations in using OA techniques.[21,23] We combine the existing recommendations provided by several authors and guiding boards, along with real-world solutions tailored for the Indian PA arena, and more specifically, for children.

Training

Unprecedented settings of the pandemic have brought forth a lack of preparedness for OA. This is evidenced by the relative ease of shifting to online avenues for consultation and therapy, but not assessment. Avenues to OA have traditionally been largely ignored and more frequently been frowned down upon during our training. CPs are trained to follow traditional manualized procedures, and justifiably so, to ensure the universal applicability of our findings. However, with the need to begin assessment for children, the lacuna in training for OA has never been more apparent. Farmer et al. caution against novice CPs employing this method.[11] It seems fair to say that senior and experienced CPs should take the lead and for the newer generation to learn through observation and supervision. Several testing companies have been organizing workshops to help CPs transition to OA. However, each company's training programs are specific to their products.

Lack of Norms

PA is highly dependent on norm-referenced tests. Norm-referenced tests lend themselves to the robustness of the reliability and validity of PA. None of the currently available standardized cognitive or neuropsychological assessments has been normed for online or remote administration. The lack of norms raises questions on the applicability and universality of the results obtained. However, several studies mentioned earlier[17–19] indicate no significant difference in the scores between OA and face-to-face assessments.

Data Quality

Despite all efforts, OA might not turn out to have the same observations as traditional assessments would have. The behavioral observations of the child might not be rich enough because of being an observation on screen. The behavior might vary in the child's natural environment, and the discrepancy in the environment the clinical psychologist is in and the child is in would also affect the nature of observation.

Reporting of Findings

The assessment reports should clearly mention that they were done online because of situational constraints. The reports could also mention the modifications made to the existing test administration and the limitations experienced. As behavioral observations would be limited, a detailed description of the testing environment would help interpret the results better. It would also be prudent to state that the report's validity is only for the pandemic period or a period of one year, and in-person assessment will have to be repeated at the earliest possible.

Informed Consent

Teleassessment brings in additional confidentiality concerns as the interaction is in cyberspace. The telepsychiatry operational guidelines 2020[1] provide a consent form in the appendix for telepsychotherapy. Similarly, the parent/caregiver must be made aware of all the constraints and explicitly give consent before the commencement of the OA. It is preferable to have them sign the consent form in real-time, either on hard-copy forms sent or on digital forms, to avoid misinterpretation of intent.

Technical Issues

Some technical constraints, like internet bandwidth and lack of access to uniform or sophisticated devices, exist and are beyond the control of either the clinical psychologist or the parent/caregiver. It is important to have a preassessment session[24] to familiarize the child and the caregiver as to what to expect, without breaking the testing protocol, and to understand the constraints of the software and testing environment, to help overcome them as much as possible. Data lag during the video assessment is a possibility that could hamper timed tests. If connectivity issues occur beyond this, the assessment should be terminated and rescheduled.

Other Issues

Issues like licensing and insurance reimbursement have been mentioned in several articles.[21,25] However, they are not currently applicable in Indian settings. Most hospital-based CPs have been conducting online consultation and therapy on hospital portals. Nonhospital-based CPs can choose from several encrypted third-party videoconferencing software. As per the IOPC recommendations,[11] Zoom software is Health Insurance Portability and Accountability Act (HIPAA) compliant. Online consultations have been ongoing in the past year. Converting the consultation sessions to assessment sessions is mainly about managing the logistics.

Other factors that need to be kept in mind while planning OA would be:

1. All assessments will be conducted in real-time using videoconferencing software.
2. The child's parent/caregiver would have to play a more involved role. Their presence will be essential to smoothen out any technical challenges that arise, and with younger children, to facilitate sitting tolerance and attention.[26]
3. A couple of sessions with both the child and the parent before planning the assessment would be prudent. It would facilitate better rapport and understanding of the child's emotional and behavioral responses and the process of assessment.
4. The parent/caregiver will be required to stay with the child throughout the assessment process as a facilitator. They would be debriefed regarding the assessment process. Instructions to maintain the sanctity of the testing process will be discussed. Avenues to maintain the discipline of assessment procedure will have to be provided to the best possible capacity. Most assessments done with CND are usually done in the presence of the parents (especially in our country). Hence, this may not be drastic deviance from the existing methodology.
5. Details of the appropriate supplies required will have to be informed in advance. A setting for the assessment, which is a quiet space with distractions minimized, a table and chair of comfortable height, and with optimal lighting, is desired. Using a computer or laptop is more advantageous than a phone or a tablet in terms of stability and hands-free use.
6. The role of parent/caregiver should be clearly defined. They must be cautioned of their role as facilitators to ease assessment and not to help or teach, or even guide their children. The authenticity of the findings, if they do not play their role as prescribed, should be discussed in the preassessment session.
7. Strict rules against recording or taking screenshots during assessment should be enforced. They not only are contrary to the rules of confidentiality and disrupt the testing procedure but also are against the copyrights of the tests. In fact, Pearson explicitly states that any form of recording of the assessment, by either the clinical psychologist or the parent, is strictly prohibited.[22]
8. There may be some subtests that require materials like blocks or objects for administration. These subtests cannot be administered online, as transportation of these materials is logistically difficult and prohibited by tool copyrights. Some assessments like the latest Wechsler scales have alternatives that can be used, and these equivalent substitute tests are based on the manual. Manualized assessments also inherently allow for some amount of flexibility when substitute tests and proration (the process of calculating the final score when all the subtest scores are not available; several multi-subtest IQ tests have proration tables in their appendix) are taken into consideration.

Unfortunately, OA techniques depend largely on the computer literacy of the parent/caregiver. One of the major challenges of the proposed method is accessing children from rural and semi-rural populations. This could be overcome by using the existing facilities of the district mental health program (DMPH) services or through hospitals' existing rural outreach programs. The DMPH center or the outreach center could be used as the facility for assessing the children in the area with the help of the staff.

OA is not being proposed to be a substitute for direct assessment, indefinitely. However, the need of the hour is to reach out to those who need our input. OA can be considered as a long-term mainstream option only if norms are created for this format of assessment. Until then, it is being proposed as a temporary replacement. However, if the assessments done over both online and offline for a few children do not show much difference, then the data can be used to recommend online mode for more routine use.

Online PA is no easy task by any means. Like any major tectonic shift in times, clinical psychology will have to keep up with the demands and changes to remain relevant and make the change the field is meant to make. OA, though unpalatable to the purists,[27,28] is the only way to reach out to a highly vulnerable group for whom the assessment and

subsequent therapeutic input will have a positive impact in the long term. Having a helpful approach by doing whatever needs to be done to help the child and family is the need of the hour, and CPs have to rise to the challenge brought on by the changing times.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

ORCID iDs

Meghana Vijayanand https://orcid.org/0000-0002-8535-9455
Vijaya Raman https://orcid.org/0000-0003-0578-5276

References

1. Bada Math, S, Manjunatha, N, Naveen Kumar, C, Basavarajappa, C, Gangadhar, BN. Telepsychiatry operational guidelines—2020. Bengaluru: NIMHANS, 2020.
2. Arora NK, Nair MK, Gulati S, et al. Neurodevelopmental disorders in children aged 2–9 years: Population-based burden estimates across five regions in India. PLoS Med July 24, 2018; 15(7): e1002615.
3. Chauhan A, Sahu JK, Jaiswal N, et al. Prevalence of autism spectrum disorder in Indian children: A systematic review and meta-analysis. Neurol India January 1, 2019; 67(1): 100.
4. Joseph JK and Devu BK. Prevalence of attention-deficit hyperactivity disorder in India: A systematic review and meta-analysis. Indian J Psychiatr Nurs February 1, 2019; 16(2): 118.
5. Chacko D and Vidhukumar K. The prevalence of specific learning disorder among school-going children in Ernakulam district, Kerala, India: Ernakulam learning disorder (ELD) study. Indian J Psychol Med May 2020; 42(3): 250–255.
6. Bunga D, Manchala HG, Ravindranath N, et al. Children with intellectual disability, impact on caregivers: A cross-sectional study. Indian J Social Psychiatry April 1, 2020; 36(2): 151.
7. Di Renzo M, Guerriero V, Petrillo M, et al. A comprehensive assessment process for children with autism spectrum disorders. *Advances in Autism.* November 19, 2019; 6(2): 95-108
8. Ioannidis JP, Cripps S, and Tanner MA. Forecasting for COVID-19 has failed. Int J Forecasting August 25, 2020. Advance Online Publication. ISSN 0169-2070. DOI: 10.1016/j.ijforecast.2020.08.004
9. Jang J, White SP, Esler AN, et al. Diagnostic evaluations of autism spectrum disorder during the COVID-19 pandemic. J Autism Deve Disord March 2021; 17: 1–2.
10. Stifel SW, Feinberg DK, Zhang Y, et al. Assessment during the COVID-19 pandemic: Ethical, legal, and safety considerations moving forward. Sch Psychol Rev November 23, 2020; 49(4): 438–452.
11. Farmer RL, McGill RJ, Dombrowski SC, McClain MB, Harris B, Lockwood AB, Powell SL, Pynn C, Smith-Kellen S, Loethen E, Benson NF. Teleassessment with children and adolescents during the coronavirus (COVID-19) pandemic and beyond: Practice and policy implications. Professional Psychology: Research and Practice. 2020; 51(5): 477.
12. Krach SK, Paskiewicz TL, and Monk MM. Testing our children when the world shuts down: Analyzing recommendations for adapted teleassessment during COVID-19. J Psychoeducational Assess December 2020; 38(8): 923–941.
13. Terje S, Stein A, and Jan-Magne K. Neuropsychological assessment and telemedicine: A preliminary study examining the reliability of neuropsychology services performed via telecommunication. J Int Neuropsychol Soc March 2003; 9(3): 472.
14. Harrell KM, Wilkins SS, Connor MK, et al. Telemedicine and the evaluation of cognitive impairment: The additive value of neuropsychological assessment. J Am Med Dir Assoc August 1, 2014; 15(8): 600–606.
15. Temple V, Drummond C, Valiquette S, et al. A comparison of intellectual assessments over videoconferencing and in-person for individuals with ID: Preliminary data. J Intellect Disabil Res June 2010; 54(6): 573–577.
16. Galusha-Glasscock JM, Horton DK, Weiner MF, et al. Video teleconference administration of the repeatable battery for the assessment of neuropsychological status. Arch Clin Neuropsychol February 1, 2016; 31(1): 8–11.
17. Brearly TW, Shura RD, Martindale SL, et al. Neuropsychological test administration by videoconference: A systematic review and meta-analysis. Neuropsychol Rev June 2017; 27(2): 174–186.
18. Hodge MA, Sutherland R, Jeng K, et al. Agreement between telehealth and face-to-face assessment of intellectual ability in children with specific learning disorder. J Telemed Telecare August 2019; 25(7): 431–437.
19. Ransom DM, Butt SM, DiVirgilio EK, et al. Pediatric teleneuropsychology: Feasibility and recommendations. Arch Clin Neuropsychol December 2020; 35(8): 1204–1214.
20. Sutherland R, Trembath D, Hodge MA, et al. Telehealth and autism: Are telehealth language assessments reliable and feasible for children with autism?. Int J Lang Commun Disord March 2019; 54(2): 281–291.
21. Bilder RM, Postal KS, Barisa M, et al. Interorganizational practice committee recommendations/guidance for teleneuropsychology (TeleNP) in response to the COVID-19 pandemic. Clin Neuropsychol November 16, 2020; 34(7–8): 1314–1334.
22. Pearson Clinical Assessments. San Antonio: Pearson clinical assessment. Appropriate use of Pearson clinical assessment content, https://www.pearsonassessments.com/content/dam/school/global/clinical/us/assets/telepractice/telepractice-no-objection-letter.pdf (1996, August 14, 2020).
23. Farmer RL, McGill RJ, Dombrowski SC, et al. Conducting psychoeducational assessments during the COVID-19 crisis: The danger of good intentions. Contemp Sch Psychol March 2021; 25(1): 27–32.
24. American Psychological Association [Internet]. Washington DC: American Psychological Association. Guidance on psychological tele-assessment during the COVID-19 crisis, http://www.apaservices.org/practice/reimbursement/health-codes/testing/tele-assessment-covid-19 (2021, May 1, 2020).
25. Capner M. Videoconferencing in the provision of psychological services at a distance. J Telemed Telecare December 1, 2000; 6(6): 311–319.
26. Galagali PM, Ghosh S, and Bhargav H. The role of telemedicine in child and adolescent health care in India. Curr Pediatr Rep 2021, October; 8: 1–8.
27. Hale M, Brennan L. InPsych. https://psychologyorgau [Internet]. 2020 [cited 2020]; Available from: https://psychology.org.au/for-members/publications/inpsych/2020/june-july-issue-3/why-have-psychologists-been-slow-to-adopt-telehealth.
28. Miller JB and Barr WB. The technology crisis in neuropsychology. Arch Clin Neuropsychol August 1, 2017; 32(5): 541–554.