Title: Neuropsychology in India from a Student Perspective

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What is the history of neuropsychology in India?
Neuropsychology in India has been evolving for about 42 years with its history dating back to 1975 when it was officially started as a specialization at the National Institute of Mental Health and Neurosciences. Currently, neuropsychology is practiced in metropolitan cities and towns such as Mumbai, Bengaluru, Gandhinagar, Kolkata, Mysore, and Hyderabad. Neurologists, psychiatrists, paediatricians, and gerontologists commonly refer patients for cognitive assessments and to rule out differential diagnoses.

How can I study neuropsychology in India?
In India, neuropsychology is considered a super specialty discipline within the field of clinical psychology. Students obtain a degree in clinical psychology by enrolling in Masters level courses, such as M.Phil, M.A., or M.Sc, usually lasting about two years. In the past 15 years or so, universities have begun offering master and doctoral level courses in cognitive science and neuroscience, with electives in neuropsychological testing. Students have the option to obtain training from cognitive science laboratories that study constructs such as perception, consciousness, and language processing. These laboratories possess state of the art technologies such as EEG, ERP systems, eye tracker devices, and virtual reality equipment, to carry out research that integrates technology and cognitive science. Institutions have now started offering neuroimaging courses and engaging in research activities. The availability of such diverse courses serve to make the study of neuropsychology more current and comprehensive.

A recent, unpublished survey found that approximately seven universities offer M.Phil. or Ph.D. in cognitive science and five offer M.Sc., M.Phil. or Ph.D. in neuroscience. Two universities offer M.Sc.in neuropsychology, and about 26 universities offer M. Phil in clinical psychology, of which a few offer neuropsychology as a specialization. Different routes exist to study neuropsychology: A popular route to study neuropsychology is to first complete a Master’s degree in clinical psychology followed by specializing in neuropsychology either by pursuing a Ph.D or by gaining specific work experience in the field, either in India or abroad. At the Master's level, several courses such as psychopathology, statistics and research design, neuroanatomy, neuropsychological assessments, and cognitive retraining and rehabilitation, are offered as building blocks. The curriculum is broadly characterised by research and clinical components.
**Research Component:** This involves carrying out an on-field study, which requires students to collect data on a clinical population or on a clinical problem, analyse the results and present the findings in the form of a thesis. An advisor/mentor supervises students and helps to prepare them for the final stage of defending their research.

**Clinical Component:** Training takes the form of internships wherein students are taught to take comprehensive case histories, administer psychological assessments, and conduct therapies. Spread over one or two years, students intern at various hospitals and clinics with the goal of gaining a wide exposure to various clinical syndromes. They interact with patients and their care-givers, obtain detailed medical and psychological histories, administer psychological and neuropsychological test batteries, and prepare reports that are then perused by junior and senior consultants at the specific hospital unit before its release. Thereafter, students are encouraged to work on therapy and/or rehabilitation modules in liaison with the consultants who in turn monitor the progress of both the patient’s well-being and the student’s learning.

After completing their Master's degree in psychology or in cognitive neuroscience, students can chose to pursue neuropsychology and enroll in a doctoral program. Several universities offer a doctoral course in clinical psychology. However, very few institutions offer a Ph.D. in neuropsychology (e.g., Nehra, Pershad, & Chopra, 2016). Generally, these programs are built on international standards and follow the biopsychosocial model in order to integrate with other disciplines such as neurology, psychiatry, and neurosurgery (Nehra, et al., 2016).

Post-doctoral grants and fellowships are relatively few and are offered by institutions that obtain grants from the government and/or, in some cases, through collaborations with universities abroad.

Some students apply for graduate studies abroad and after obtaining the degree either at a master's level or a doctoral degree, choose to return to India as private practitioners in hospitals and clinics, and/or join as faculty in universities and colleges; on the other hand, the ones who choose to continue their careers, may choose to conduct cross-cultural research and be engaged in international, professional organizations such as the International Neuropsychology Society.

Alternately, after completing their Master’s degree in clinical psychology, students can chose to work as an apprentice with an expert for a specific number of hours. The aim is to gain an exclusive and intensive focus on learning and practicing neuropsychology in a work setting. Although this experience may provide the basic skills to conduct neuropsychological assessments and impart rehabilitation-based training, this form of learning still requires formal recognition from a government based licensing board.

**What does it take to practice as a neuropsychologist in India?**

After completing the requisite coursework, one can open a private practice, work in government or private hospitals or clinics, join as faculty in a university to teach and/or conduct research, work in the industry (such as Pearson Assessment) or the corporate sector that integrates neuropsychology with advertising and marketing, or do a combination of any of these options.
In light of India’s large population and the increasing need for mental health experts, clinical practice of neuropsychology takes precedence over research. Moreover, research funding by governmental agencies is usually scarce, thus making clinical practice a more functional and practical option.

To begin independent practice following the academic coursework, a certification from the Rehabilitation Council of India (RCI) is a requirement. However, given the dearth of neuropsychologists and the high demands of the population seeking mental health treatment, the RCI has a challenging time overseeing the increasing number of practicing neuropsychologists who are not certified. Hence, neuropsychologists practicing in hospitals and clinics may or may not be certified, and strict adherence to universal regulatory standards is lacking in the country. An urgent need to streamline the process by creating neuropsychology-specific organizations as well as licensing and boarding organizations is apparent. Students graduating from universities that are RCI-certified can practice anywhere in the country. Given that there are very few universities offering specific coursework in neuropsychology, clinical psychologists who are RCI-certified from schools that impart training in all aspects of clinical work, can also practice as a neuropsychologist. So far, the RCI requirement is yet to be specifically implemented for neuropsychology (Kumar & Sadasivan, 2016).

**What are the challenges that limit the practice of neuropsychology?**

Despite the history, practicing neuropsychology is fraught with challenges owing to the presence of diverse languages and religion-specific mores of what is accepted as a form of diagnosis and intervention. Further, the complex interaction among varied levels of education and income, deeply rooted beliefs about the effectiveness of alternative forms of medicine (such as Ayurveda, Homeopathy), and the escalating costs of medical practice limit the scope of practice.

Several other issues exist, such as the use of Western tests without appropriately adapting it to the culture, the presence of few ecologically valid tests, the limited recognition of neuropsychology as a profession by the larger medical community, and the absence of structured, speciality training programs across the country to teach students neuropsychology.

**So, what is neuropsychology’s future in India?**

Neuropsychology is gaining recognition in India. Given the increased use of social media, online psychology communities and list serves are considered as useful platforms for keeping abreast with information in the field, networking, and for connecting with various organizations for continued education and research. A number of neuropsychologists are working hard to make this field more regulated and thus systematized. The growing number of international collaborations and the increased funding opportunities provided for research serve as incentives for students, the next generation, to step up and propel the field forward. This certainly is a welcoming change, especially for patients and their caregivers who will benefit from the skills offered by neuropsychologists, and more broadly, to recognise neuropsychology as a scientific profession.

**References:**