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## Answers lead to more questions

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I was born in a Punjabi family after the Indo-Pak Partition in 1948. My parents raised six children at a time when the country was going through a resurgent constructive phase and were very conscious of the need to provide the best education for us all. While my mother took care of our material, physical and emotional needs, it was our father who was the driving force in the educational process. I still remember the maths sessions with him which left us all in tears. The passion with which the science teacher at St Joseph's Convent and the Reader of Zoology at Home Science College in Jabalpur taught us has left an indelible impression on my mind. Being a bright all-round student, with gold medals in science subjects at high school and intermediate college at the state level, at my father's behest I entered the portals of the Medical College at Jabalpur.

Soon after finishing medical school in 1970 and a residency in gynecology and obstetrics, I got married and came to Delhi at the All India Institute of Medical Sciences where my husband was doing his registrarship in urology. Here, I completed the remaining six months of residency in pediatrics, guided by the

thought that it was best for women to practice these branches of medicine. At the end of the residency, I joined the Anatomy Department at AIIMS to teach undergraduates.

I joined the postgraduate M.D. course, earlier referred to as MS. in anatomy in 1972 and here, while pursuing my research thesis on cerebellum and cerebellar nuclei in *Macaca mulatta* under Professor N.H. Keswani, I engaged myself in the study of the nervous system. This had fascinated me as a medical student, but the transition from medical training to the scientific technology arena was not easy. I obtained my M.D. degree in 1974, and my interest and willingness to learn pushed me into acquiring further technological skills during my senior residency of five years in the department. Dr Gomathy Gopinath helped me in my endeavours and forays.

I joined the faculty at AIIMS as a Lecturer in 1979. My interest gravitated to studying how different areas of the human nervous system develop, the departmental head, Professor Veena Bijlani encouraged me to register for a Ph.D. but with two children to handle I was reluctant but finally, after a lot of persistence, I registered for a Ph.D. course in 1985.

I submitted my Ph.D. thesis in 1987 under the guidance of Professor S Veena Bijlani and P.N. Tandon. Thanks to INSA Hungarian and IBRO-UNESCO fellowships I got an opportunity to visit the Semmelweiss University at Budapest and to work with Professors Jozsef Hamori and Tamas Freund. Here I learnt immunohistochemistry, combination of Golgi and immunocytochemical techniques, and computerized quantitative methods. On my return, the human fetal retina became the focus of my interest.

These studies were carried out at a time when molecular biology, genetics and non-invasive technologies to understand brain functioning and development were at their peak and our efforts seemed meagre and unfashionable. Fortunately, there is now a resurgence in knowing more details about human brain development based on emerging evidence that neurologic diseases like schizophrenia, autism, epilepsy begin early in life and have a developmental basis. Our studies provide valuable information on

the status of detailed development of at least some of the human brain regions.

Throughout my career, I have focussed on research, teaching of anatomy and my family. I feel privileged to have had the opportunity to learn about the developing brain and marvel at the way nature created the brain. Science has helped me understand the brain and humanity. Science has helped me give back to society. For those in science, I believe science is addictive and in neuroscience research the excitement continues longer because the moment you find answers even more questions arise.