

Cognitive Health and Education in India: Need of the Hour

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Abstract

Cognitive health-understanding the health of the brain and its ability to interpret and retrieve the stored information. Cognition is the combination of several brain functions such as memory, perception, language, intuition, judgment and the ability to learn. The deterioration of cognitive health, in an early stage of life or a later stage of life, has a great impact on everyday life. Problems such as declining mental function or dementia, Alzheimer's and other brain-related issues, which generally develop later in life need immediate attention. The need of the hour from the author's perspective is to introduce the cognitive health techniques for assessment and evaluation of the cognitive impairments. The need for Cognitive science courses in the basic level of education is necessary which gives an idea as to how behavior and intelligence are interlinked. While formal level education helps us only to understand the brain areas and their functions.

Keywords: Cognition; Memory; Dementia; Mental health; Cognitive science

Introduction

People with cognitive disorders have issues that affect their ability to perform one or more of these actions-perception (taking in information from our senses), memory, learning, judgment, problem-solving, using language or planning. There are various causes of this disorders-dementia, delirium, amnesia and so on. This cognitive dysfunction in the early stage of life will affect us in day to day activities where it is hard for the individual to deal with cognitive skills like recognition, ability to sustain attention on a particular object, decision making and so on. To address these issues, we need to detect impaired cognitive domains in the individual, both with and without pathologies and help them get back to their daily activities. For this kind of situation, the cognitive tool helps us to assess a large range of cognitive skills that are related to executive functions and they help to improvise in their particular aspect of the cognitive decline. The greatest advantage of the human brain is its plasticity. Where cognitive plasticity refers to the ability to adapt changes in patterns of cognition related to brain activity. Having this feature, the brain and its activates can be manipulated for the advantage of the individuals suffering from cognitive decline. To the advantage of plasticity, the term "Cognitive reserve" in this field is an important term based on the efficient utilization of brain networks or enhanced ability to recruit alternate brain networks as and when needed. It postulates that individual differences in the cognitive processes, underlying task performance allows some people to cope better than those with brain damage. Many kinds of tasks boost our memory, attention and perception areas of the human brain like the classic Stroop Test. However, for inhibition, divided attention and the Wisconsin card sorting test is used to update and shift the memory without getting distracted. A visual perception evaluation method which will help to assess the perception level of images and sounds. Moreover, other experiments were also developed and used to understand the human brain functions and cognitive behavior^[1].

Why do we need cognitive health care in India and cognitive science as a basic standard course in education?

There is a better way to improve cognitive decline and dementia than medication and surgery. In the Indian context, there is a greater need to develop cognitive health care. As studies conducted in Indian regions show that the elderly population had a poor cognitive function score^[2-5]. This health concerns of these aging individuals are changing such that non-communicable chronic diseases in late life, such as dementia, are becoming increasingly prevalent. This is no exception in the young population as well due to the inability to escape the vicious cycle of inter-generational poverty and illiteracy affecting the human mind. Similarly, a range of social disadvantages leads to cognitive decline. Studies show that formal cognitive training has been beneficial for improving cognitive health. Cognitive health care training techniques could reduce health care costs by helping individuals maintain an active lifestyle by getting access to memory training, reasoning training, processing-speed training and another executive process. This platform improves participants' mental skills in the declined areas of the brain in which they were trained. A recent evidence-based review summarizing more than 30 cognitive training interventions for older adults showed the overall significant differences between memory-trained and control group participants. Cognitive health care will help us to improve our mental health and in a diversely populated area like India, this field will help us to access parties in a more humanistic manner. The data obtained by using cognitive techniques and results collected from the cognitive assessment tests is very helpful for both patients and the experts which will allow them to recognize and

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understand brain disorders, behavior alterations, injuries and neurodevelopmental and neurodegenerative disorders better in the particular region or area. This will allow professionals to effectively identify and help the population and treat it in a better manner. The need of the hour also lies upon the introduction of this field at basic levels of education. Cognitive Science is the study of the human mind and brain, focusing on how the mind represents and manipulates knowledge and how mental representations and processes are realized in the brain. The field which is interdisciplinary helps us to understand the combining ideas, principles and methods of psychology, computer science, linguistics, philosophy, neuroscience, etc. Having so many fields involved, the study of cognitive science needs to be introduced at the under graduation level in India, which will help the students have an insight to many paradigms at once and also allows them to know more about human abilities of reasoning, memory, problem-solving, human language and communication and their underlying brain mechanisms. This would help them in understanding the current Indian scenario which is full of diversity and gives a better belletristic knowledge of cognitive decline and pleasing treatment for this diverse population. Having this at under graduation level, therefore, gives scope for better understanding for students of the Indian mindsets on dementia and age-related cognitive disorders, etc. For many students who traditionally think of psychology and other related fields of study, to be active inquirers into the processes of learning and thinking, solve problems and so on will explore high possibilities in this field^[6-9].

Conclusion

Bottom line, to say that the cognitive science field in India is at a nascent stage and requires immediate attention for its development in both health and academics. Academically, this field gives us better solutions in terms of training and therapies and improving them for the diversified population like India.

It also assists to improve many mental activities like decision making in younger and older adults. In the Health sector, the field of Cognitive science will have astonishing progress as its non-invasive techniques to improve the mental health imparts a greater possibility for increasing reach among the common public to access cognitive tools to cure many brain-related disorders in a very cost-efficient way.

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