

A Review on Approaches and Assumptions in Human Neuroscience

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Review Article

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ABSTRACT

Neuroscience or Neural Science is a multidisciplinary science mainly deals with the study of the structure and function of the nervous system. Neurosciences the core subject deals with the evolutionary studies, [developmental biology](#), cellular studies and [molecular biology](#) at the very cellular level, physiology, anatomy and pharmacology and pharmacological studies of the nervous system, as well as computational, behavioural and [cognitive neurosciences](#). Neuroscientist mainly studies on the brain and related organs and their impact on behaviour, neural and cognitive functions. Neurologists or Neuroscientists also focusses on what happens to the nervous system when people have neurological, psychiatric and [neurodevelopmental disorders](#).

INTRODUCTION

Nervous system can be split into two parts one is the central [nervous system](#) includes brain and spinal cord, and the peripheral nervous system is the part of the nervous system which consists of the nerves, ganglia outside the brain and spinal cord. In many species including human beings the nervous system is the most complex organ system in the body, residing in the inner part of the brain. The human brain alone contains around 100 billion [neurons](#) and 100 trillion synapses and many substructures which are connected to each other in synaptic or lobed networks. Approximately 25-30,000 genes belonging to the human genome are expressed specifically in the brain [1-10].

People should be educated and obtain knowledge on various functions of the brain and these diseases so that the right preventive measures can be taken during their occurrence. People can gain awareness through literature, internet sources, family physicians and consultants. [Open access journals](#) provide more visibility and accessibility to the readers in gaining the required information. The on-going researches all over the world, which are being exhibited through open access journals, serve as the main source of information in various fields.

In order to create awareness among the people, group of physicians and professionals unite to form a [society](#) or an organization. The main aim of these societies or organisations is to counsel or spread awareness among the victims of brain disorders as well as healthy professionals, Neurologists, Psychologists and scholar researchers. Major societies like [Autism Community Network](#) aims to improve public awareness in brain related disorders like autism. Autism Spectrum Disorder (ASD) is a complex neurobiological disorder known simply as autism and the advancement of quality standards to enhance patient care [11-24]. [European Academy of Neurology](#) of Austria is being organized by OMICS Group International. OMICS Group International is an amalgamation of Open Access publications and worldwide international science conferences and the scientific events conducted in the field of Neurology. [EDYCS Epilepsy Group](#) EDYCS Epilepsy Group is the leading NGO and associated with the OMICS International and is primarily dedicated to uphold the rights and addressing the needs of all those affected by epilepsy, through the promotion and provision of high quality services and working to ensure the continual

enhancement of the quality of the people it serves. [Epilepsy Association of Sierra Leone](#) associated with the OMICS International demystify this contentious condition and give readers the minimum knowledge to understand people with epilepsy and to spread this knowledge in the health community as well as the community at large in order to decrease the widespread misconception about epilepsy. [American Society of Human Genetics](#) is involved in providing support to Neurology related disorders patients promoting the advances in the diagnosis and treatment of genetic diseases. The main objective of these societies is to disseminate the scientific knowledge to Neurologists and researchers so that they can provide better service to the patients and work together to reduce the risk of neurological disorders. The society enables the understanding of the disorders by creating awareness among the global communities.

Open Access literature plays a key role in proving the information and current researches across the globe. [Journal of Neurology and Neuroscience](#) provides information on latest technologies related to Neurology and Neuroscience (PCI) and also many conferences like [Neuroscience Conferences](#) in the field of Neuroscience provide a platform for clinicians, researchers, surgeons, health practitioners as well as industrial leaders to participate their views at our Neuroscience Conferences and discussing many Neurology related disease such as Brain Disorders, Alzheimer's disease, Dementia, Neurology Parkinsons, Neurosurgery, Spine. [Journal of Neuroinfectious Diseases](#) is an international [peer-reviewed scholarly journal](#), which published the papers across the world on Neuroinfectious disease as a Volume 7, Issue 3.

[Journal of Neurological Disorders](#) Journal studies improve the knowledge and provide cutting-edge research strategies for the development of new therapeutics. [Journal of Neuroscience & Clinical Research](#) is a leading provider of information on neurological diseases and novel methods of treatment followed. The above mentioned Open access journals on Neurology are the peer-reviewed journals that maintain the quality and standard of the journal content, reviewer's agreement and respective editor's acceptance in order to publish an article. These journals ensures the barrier-free distribution of its content through online open access and thus helps in improving the citations for authors and attaining good [journal impact factors](#).

NEUROLOGICAL RELATED DISORDERS

The most common Neurological diseases include Alzheimers, Autism, Bipolar Disorder, Brain Disorders & Therapy, Depression and Anxiety, [Epilepsy](#), Mental Disorders, Multiple Sclerosis, Neuroimmunology, [Neurological Disorders](#), Neurorehabilitation, Neuroinfectious Diseases Of these diseases mentioned, Alzheimers are the most prevalent in USA which include Neurological Disorders, Stroke, Depression and Anxiety, Epilepsy, Brain Disorders are common.

Patient suffering from Alzheimer's disease also called as [Dementia](#) generally develops among the old age, leading to loss of memory and cognitive functioning such as thinking, remembering and reasoning and behavioural abilities that disturbs the daily routine of the affected people. Parkinsonism is a [neurodegenerative disease](#) with symptoms like tremor, rigidity and postural problems. Through Open access healthcare literature provides information of novel researches on-going in the current era. Here is the list of few articles which provide reports that are competent enough for a person to attain knowledge on Neurology. An article Evaluation and Comparison of Dietary Patterns in Patients with Alzheimer's disease and Healthy Controls written by Nimah Bahreini, explains Alzheimer disease (AD) is a chronic and progressive neurodegenerative disorder, with multiple pathophysiological mechanisms which features mainly with memory impairment and loss of cognitive function. In 2015, about 48 million people suffering from Alzheimer disease throughout the world. [Parkinson's disease](#) ^[25-40] is a common neurodegenerative disorder belonging to a heterogeneous group of disorders with α -synuclein pathology and PD dementia. Hypoestoxide is being developed to combat microgliosis, astrogliosis, loss of dopaminergic neurons, motor behavioral deficits and α -synuclein pathology in [Kimberly Burnham](#) clearly explained Narrative therapy (story telling) and expressive poetry (sensory words) can be used to engage the mirror neurons and motor neurons in the brain and decrease the symptoms in Parkinson's disease ^[41-60].

Dysthymia is a mild but long-term (chronic) form of depression. Symptoms usually last for at least two years, and often for much longer than that. [Dysthymia](#) interferes with your ability to function and enjoy life ^[61-70]. With dysthymia, you may lose interest in normal daily activities, feel hopeless, lack productivity, and have low self-esteem and an overall feeling of inadequacy. In a manuscript entitled Attitudes toward Seeking Treatment for Depression among Community Dwelling Elders in a Western City in the United States authored by Frances Wilby MSW of USA provides data regarding dysthymia is a life-threatening consequences, depression among older adults is undertreated in many nations. One study of community dwelling elders in a Dutch community found that only

4.9% who experienced significant [depressive symptoms](#) received [treatment](#) for their condition. [2nd International Conference on Neurological Disorders and Stroke](#) held in April 2016 in Dubai, ohamad Fayez Al Homsy presented his views on Dehydration exacerbates cerebral microvascular responses to hyperthermia.

Apart from the articles, presentation at conferences, symposiums, workshops also yield a better exposure to health information and advanced technologies that are being invented in the present generation. In [7th Global Neurologists Annual Meeting on Neurology and Neuro Surgery](#) held in August 2016 in Austria , Harish C Pant has discussed about a A novel therapeutic approach to ameliorate the Parkinson's and Alzheimer's Disease phenotypes At [2nd International Conference on Brain Disorders and Therapeutics](#) Ann Marie Gillie, discussed about the Epilepsy.

NOVEL TECHNOLOGIES IN NEUROSCIENCES

As the Neurological diseases have become more prevalent, there are many scientific professionals are trained especially in detecting, treating and counselling the prevention of [Neurological disorders](#) and these professionals are well known as Neurologists. There exist so many Neurologists in USA as per a survey conducted in 2016. In order to diagnose the condition of the brain, physicians proceed for Electrodiagnostic tests which include electromyography (EMG) and nerve conduction velocity (NCV) testing ^[71-76]. [Liyang Cui](#) is a scientific professional with research expertise in Neurology. Liyang Cui has presented such as the external anal sphincter is innervated by Onuf's nucleus, which is located in the anterior horn of the spinal cord at the S2 level through the pudendal nerve. Lesions of Onuf's nuclei and the roots of the sacral and pudendal nerves could be displayed by the external anal sphincter electromyography (EMG), an important neurophysiological method widely used by neurologists.

[Ninh Doan](#) well known scientist of Neurology clearly explained Traumatic brain injury (TBI) remains a significant problem in both the pediatric and adult populations. Approximately 500,000-700,000 pediatric TBI incidents and 2.5 million adults are suffered from TBI every year. TBI is ranged from mild to severe and its management depends of the severity of the injury.. Through this test we can know the size of the heart, thickness of the walls of the heart, presence of stenosis and regurgitation of blood ^[77-90].

[Electroencephalography](#) and Brain Imaging is one more technique [Gadolinium-chelates](#) are frequently used to evaluate a variety of pathological conditions of brain during magnetic resonance imaging (MRI). Pre and postcontrast T1-gradient recalled echo (T1GRE) scans are usually compared for assessing the various characteristics of lesions as vascularity, internal [necrosis](#) or breach in blood brain barrier. [Arthur L. Brody](#) of USA is one of the experts in the field of Psychiatry & Biobehavioral Sciences with expertise in Psychiatry ^[91-100].

CONCLUSION

Neurological disorders are most prominent and prevalent in USA. Many innovative technologies have been developed to reduce the mortality due to Neurological Problems. [Neurological Disorders](#) occur when brain is damaged by injury, disease, or health conditions or external conditions such as family and environment. The three brain chemicals noradrenaline, dopamine and serotonin are involved in both bodily functions and brain. The goal of this session is to understand the Causes, Origin, Genesis and Source of various types of Neurological disorders. All this information can be accessed in open access health care literature which exhibits the novel techniques and innovative researches taking place in the research field. Many professionals share their views; suggestions through the [open access literature](#) which can be accessed by all in order attain knowledge on brain diseases. Although neurological disease is the major problem in USA, the developed technologies, awareness through the literature have given hope to the patients for reducing the mortality rate.

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