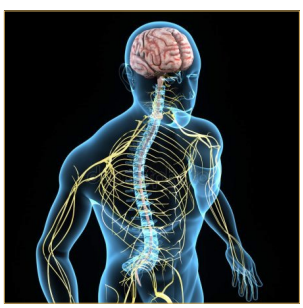
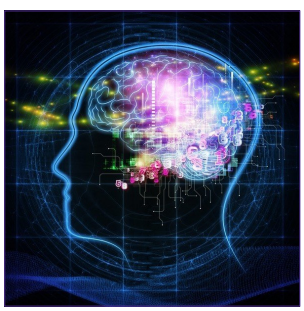
Keynote Forum
June 10, 2019

CNS 2019



2nd International Conference on

Central Nervous System and Therapeutics

June 10-11, 2019 | Edinburgh, Scotland

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Tamara C McGill Carter

The Chicago School of professional Psychology, USA

Human memory and recall: Bridging the gap between encoding and recall of information

Statement of the Problem: Memory differences over the short term and the long-term memory has been thought to differ in many ways in terms of capacity, the underlying neural substrates, and the types of processes that support performance (Rose & Craik, 2012). With certain functions such as cognitive tasks and high and low frequency words, the memory works to process the information that enters the brain and categorizes the information in either short term (working memory) or long term memory, depending upon the information being stored (McFarlane & Humphreys, 2012). Research into the human memory has yet to understand exactly how short- and long-term memory works in storing information. This is largely due to a lack of converging evidence on the construct of attention in memory research (McFarlane & Humphreys, 2012).

Long standing and recent research into memory has found substantial evidence and characteristics that separate short- and long-term memory and models have been designed to make clear the differences between the two memory systems (Rose, Myerson, Roediger III, & Hale, 2010). Researchers have identified that the human memory is separated into two memory systems: Primary and Secondary memory. Primary memory has been identified as the Short-Term Memory and the Secondary Memory is referred to as the Long-Term memory (Rose & Craik, 2012). In understanding the difference in these memory systems, one is concerned over the amount of information that can be maintained in each system. Primary memory or STM is limited in the information that can be maintained while secondary memory or LTM is infinite in the information that is maintained in that system. A further point of separating PM and SM concerns the differences in the type of encoding, maintenance, and retrieval processes involved in performance on tasks thought to tap into the two systems. For example, with primary memory or STM tasks that require remembering a series of words and/or names of others, one tends to rehearse the words and their performance is better when they can do so without distraction. On the other hand, with secondary memory or LTM tasks, it is usually possible to rehearse a long list after only a single presentation or to continuously rehearse even a short list over a long delay. Another source of evidence for the existence of the two differential memory systems is the damage to the brain that will make processing and later retrieving memory impossible or delayed, especially damage to the hippocampus, which relays the information to the two systems after entering into the brain. This comprehensive qualitative research article will take a trip into the human memory to understand how both memory systems function separately and in unison when certain tasks, recognition, recall, and maintenance of information is tested against both systems.ss

Speaker Biography

Tamara C McGill Carter expertise is in Neuroanatomy and Neuroscience with a focus on the intricate workings of the Limbic and Memory systems. Her master's thesis surrounds Human Memory and Encoding, detailing the fundamental changes that creates as well as destroy memories. She is currently is training in to become a licensed Neuropsychologist and is also finishing her final year of the Chicago School of Professional Psychology's Educational Psychology and Technology doctorate program, due to graduate by next summer. Her dissertation's focus centers on Autism, Theory of Mind, and Executive Functioning. She expertise in neuroanatomy further expanded while working with individuals with developmental disabilities/delays at several Home Health Agencies, which created several projects centering on how autism and developmental delays affect the brain. She currently holds dual bachelor's degrees in Psychology from Indiana University Northwest in Gary and a Master of Arts degree from the Chicago School of professional Psychology, the concentration focus being Trauma and Crisis Intervention.

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Karl Sterling

PhysioChains Education, USA

Neuropsychomotor training: A fitness based approach to Brain and Nervous System Rehabilitation

While Parkinson's Disease (PD), Epilepsy, Multiple Sclerosis (MS), and other neurological disorders can be debilitating, there is plenty of compelling data to show that exercise is one of the best ways to manage disease symptoms. Studies show that regular exercise can improve gait, grip, balance, stability, strength, cognitive function, and motor control. In addition, this improvement in movement and mobility helps to reduce falls, injuries, and other various complications in those affected by neurological disorders. While traditional forms of exercise can be helpful, implementation of a few simple extra strategies will help to realize significantly greater benefits in managing disease symptoms. Neuropsychomotor training sees the body as a whole unit made up of many systems. When one system is compromised, other systems will fall short of realizing optimal functionality. A holistic approach to exercise will optimize benefits, results, and improve effectiveness in managing disease symptoms. Highlights of neuropsychomotor training include: waking up the nervous system and brain prior to exercise. This causes immediate improvements in balance, movement, mobility, and stability. Other strategies include: visual, vestibular, and nervous system assessments and resets prior to exercise, all of which enhance exercise benefits and help to more effectively manage disease symptoms. In addition, research shows that various forms of cognitive exercise during focused movement help to develop new neural firing pathways in the brain which helps to improve dual-tasking abilities and reduce fall risk.

Speaker Biography

Karl Sterling is a neurorehabilitation specialist based in Syracuse, New York and is the creator of the Parkinson's Regeneration Training ® education program. While his extensive experience as a trainer includes working with a variety of populations, he primarily specializes in working with clients who have movement disorders such as Parkinson's disease, MSA (Multiple System Atrophy), MS, Charcot-Marie-Tooth, Alzheimer's, Epilepsy, Autism, and more. He travels extensively throughout the United States and internationally as public speaker, keynote speaker, and educator in the movement disorder, human movement, and personal growth arenas. He is the Chief Operating Officer of Agile Human Performance, Inc and owner/CEO of PhysioChains LLC which currently offers Parkinson's Regeneration Training ® courses worldwide.

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