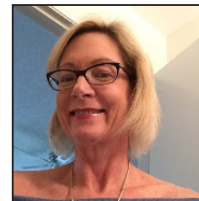


Neuroscience and its application to the field of pediatric speech-language pathology

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Abstract

Statement of the Problem: Many speech-language pathologists are not aware of the underlying causation and treatment strategies of pediatric communication disorders pertaining to the area of neuroscience. Understanding the basics of neurogenesis and neuroplasticity add an essential component necessary for treatment efficacy in the field of speech-language pathology. In addition, understanding the principals of executive functioning play a key role regarding the attentional network of all individuals, especially with patients presenting with a diagnosis of attention deficit disorder, inclusive of those with a high impulsivity index. Sensory modulation also plays a key role in the habilitation or rehabilitation of adapting to the environment in an effective manner necessary for activities of daily living. Attention to task and effective orientation to one's environment are highly dependent upon the patients' self-regulation and sensory processing. The focus of this presentation is in the field of pediatrics; however, it is important to understand that neuroplasticity continues throughout adulthood. Modulation of mood, as well as creating new pathways for learning and memory are examples of where neurogenesis and neuroplasticity are salient features in the areas of pediatrics and geriatrics. Another area that negatively impacts learning in people of all ages is the detrimental impact of inflammation and its relation to the immune system. This is understanding the impact of outcome measures during the waxing and waning of the patients' immune system. In conclusion, it is vital that speech-language pathologists do not solely rely on standardized testing as the determination of eligibility and discharge services, yet add to the evaluation and treatment process the impact of the basics of neuroscience.



Biography

Julianne Freiwald has been practicing in the field of speech-language pathology for close to 40 years. She received her undergraduate degree in speech and hearing sciences from the University of Miami in 1980. She received her masters and doctoral degrees from Nova Southeastern University in Speech-language pathology. Her interest in neuroscience peaked when she completed the course, "The Neurology of Behavior" at Harvard Medical School. Dr Julie is certified in neurodevelopmental treatment (pediatrics) NDTA which has its foundation from the early works of Dr Bobath. Recent awards include the outstanding award for Speech Language Pathologist in Hialeah, FL for 2018 and the Hall of Fame award for 2019 in Hialeah, FL. Dr Julie lectured for Advance Magazine for nearly three consecutive years throughout Florida on various topics inclusive of "Chronic Neurological Impairments." She currently resides in Vero Beach, FL where she is in private practice.

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