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## Modern clinical neuro-psychology as described by Dostoevsky

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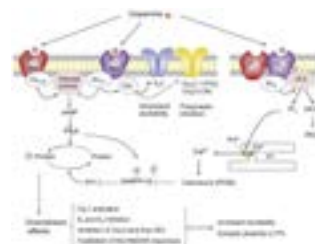
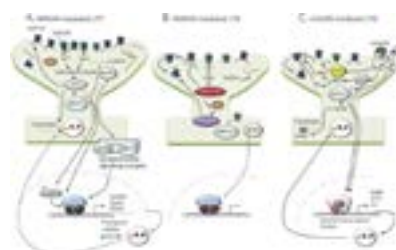
This presentation uses the biography and works of Dostoevsky, one of the most powerful classical writers, to explore several topics in neuropsychology. We will begin by reviewing the author's biography, in particular his history of epilepsy. We will then proceed to discuss his neuropsychological deficits including inability to experience negative emotions, hypo-sexuality, hyper-graphia and hyper-religiosity. Moreover, we will discuss the semiology pertaining to his seizures including his euphoric auras. We will confirm a diagnosis of right temporal lobe epilepsy with involvement of the amygdala. To further explore the above topics, we will use his novel "The Idiot", which is considered (semi)autobiographical. At the end, we will discuss status epilepticus which was the fate of the protagonist of the novel.

Further, we will review author's addiction to gambling and explore the potential underlying fronto-temporal networks responsible for addiction behavior in epilepsy. To this end, we will discuss yet another (semi) autobiographical masterpiece of the author: "The Gambler". We will discuss the underlying neurological substrate for addiction behavior and impulse control, including the role of dopaminergic signaling in frontal lobe networks.

We will then proceed to discuss author's greatest masterpiece, "Crime and Punishment". The discussion will mostly focus on forensic psychology. At the end, we

will review of the "Brothers Karamazov" mostly focusing on pseudo-seizures and criminal behavior.

In conclusion, Dostoevsky suffered with right temporal lobe epilepsy resulting in the classical triad of hypo-sexuality, hyper-graphia and hyper-religiosity seen in this condition. Due to the involvement of amygdala, he was unable to experience negative emotions. Conceivably, involvement of the fronto-temporal networks was responsible for his gambling addiction.



### Biography

Mitra Assadi is director of the Headache Medicine and Pediatric Neurology at the Capital Institute for Neurosciences. Board certified in neurology and clinical neurophysiology; she was among one of the first neurologists in the United States to obtain a board certification in headache medicine in 2008. She is actively involved in teaching and research. She is a Professor of Neurology at Robert Wood Johnson Medical School and the Director of the Neurology Clerkship

at Capital Health system. Her research has mostly focused on neuro-genetic disorders, in particular leukodystrophies. She has served as a clinical investigator at the Center for Cell and Gene Therapy at the Rowan University since 2004. She has special expertise in Canavan Disease and her published research on the use of lithium in Canavan patients has established the standard of care for these patients in the scientific community.

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