


Fall 9-13-2014

# The Epidemic of Mental and Neurological Health

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## Citation of this paper:

Malik, Mohsyn I., "The Epidemic of Mental and Neurological Health" (2014). *Psychology Publications*. 99.  
<https://ir.lib.uwo.ca/psychologypub/99>

The Epidemic of Mental and Neurological Health

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### Abstract

This paper composes an image of modern mental and neurological health issues and looks to draw links to the current epidemic based on research and studies found online the internet and off-line. The goal is to examine what may be the underlying problem for a lot of these increases in mental health issues and neurodegenerative diseases and what are some promising clinical and sociocultural advances that may help. It explores problems such as the negative impact of the pharmaceutical giants, the increase in apathy in the work place and the general stigma towards mental disease. Through current research, the use of Deep-Brain Stimulation (DBS) continues to look more and more promising as a technique to combat both mental and neurological illnesses. This paper examines how it works and what role it could play in the fight against these problems.

*Keywords:* mental illness, neurodegenerative, deep-brain stimulation, BigPharma, stigma, epidemic

## The Epidemic of Mental and Neurological Health

“I think, therefore I am” This fundamental ideology stated by 17<sup>th</sup> century French philosopher René Descartes is essential to our existence as humans. It represents the incredible importance of the human nervous system and human’s unique ability to question our sentient awareness. In essence, this quote exhibits human’s greatest mystery: the brain. For without the brain, and the ability to think, we no longer exist in reality. By virtue of the fact that the brain is the medium through which we perceive reality, it clearly has great importance and therefore when it begins to fail we should be very alarmed. In general, we recognize this to be true, for mental or neurological illnesses have gravely affected numerous people’s lives (World Health Organization, 2001). With all of this in mind, it should be extremely concerning for anyone to hear that the number of cases of mental and neurological illnesses have reached unprecedented heights and are on the rise (Whitaker, 2011). To make matters worse, the world has created a stigma of mental illness (Brace et al. 1999) making it more difficult to help these people. With this serious increase of neurological illnesses and the lack of awareness from the world, this can only be defined as a full-on epidemic.

The breadth of this problem encompasses most issues dealing with the brain, including mental illnesses like schizophrenia or anxiety as well as neurological disorders such as Parkinson’s disease and dystonia. The goal is to try examining the obstacles that currently inhibit the brain from operating as nature intended, and then seeking a solution.

The media has been at the forefront of broadcasting the current epidemic. The public has endured numerous tragedies over the past few decades at the hand of sociopathic mass murdering. Martha Stout (2005), best known for her book “The Sociopath Next Door” analyzes the shocking statistics: “*The 1991 Epidemiologic Catchment Area study, sponsored by the National Institute of Mental Health, reported that in the fifteen years preceding the study, the prevalence of antisocial personality disorder had nearly doubled among the young in America*” Note this study took place before nationally recognized massacres such as Columbine (1999) and the Sandy Hook School Shooting (2012), leading one to believe that this trend still exists today more than 20 years later. Names making headlines recently include Aaron Alexis, Adam Lanza, James Holmes, Jared Lee Lougher and Seung-Hi Cho who collectively account for the death of 92 people and over 100 injuries. All of these individuals were recognized as having a mental illness ranging from major depression, to paranoid schizophrenic, to severe anxiety. The number of people crippled by a mental illness has increased by five folds since 1955, and that number is increasing by 400 people a day (Whitaker, 2011).

On the other spectrum of brain burdening diseases, there are the neurological disorders that continue to debilitate the populace. These are the neuropsychiatric and brain dysfunctions dealing with the injury, underdevelopment, biochemical, anatomical, or electrical malfunction of the nervous system. A well-heard of example is the inexorable grip of Alzheimer’s which dominates an estimated 5.2 million people in the U.S.A and is the 6<sup>th</sup> leading cause of death in the States (alz.org, 2013). Other predominant disorders on the rise include Parkinson’s and Multiple Sclerosis.

So, why is this happening? There are three big reasons: the rise of BigPharma, the cultural plague, and the social stigma towards mental illness. BigPharma refers to the drug-based market

that is fueling this epidemic. Based on Robert Whitaker's studies (2011), mental illnesses have doubled since the introduction of Prozac- the wonder drug for mental illness – in 1987. Believed to have a hand in DSM-5 (the international journal for diagnosis of mental illnesses), BigPharma has used the method of over diagnosing to increase revenue and by doing so, induced more severe psychiatric symptoms on a person who likely was not that ill initially (Frances, 2012). The second reason for the rise deals with the dehumanization of society. Gallup polls (2013) show that only 30% of workers were “engaged, or involved in, enthusiastic about, and committed to their workplace.” While a gross majority were actively “disengaged” in their workplace. Similar studies show the decrease in care towards education between elementary school, where 80% reported to be engaged, to high school, where only 40% were (Gallap, 2013). On top of this is the student loan crisis, which all together leads much of the population to feel hopelessness, passivity, boredom, fear, isolation and dehumanization. These emotions cumulate into a loss of autonomy and stimulation (Levine, 2013). Also, the increase of chemicals, toxins and pesticides in our diet directly correlate to the rise in neurological disorders. The final reason is the stigma towards mental illness. People have developed negative attitudes towards mental illnesses due to media image. Relative to other diseases, mental illnesses does not receive nearly as much attention, care, money or time. Between 2000 and 2010, deaths resulting from cancer, heart disease, HIV and Strokes have all decreased while deaths resulting from Alzheimer's have increased by 68% (alz.org, 2013). Mental and neurological disorders never measure up to the same importance of other diseases like cancer, and therefore receive lot less attention from the public (Corrigan, 2005). However, these diseases are destroying just as many lives, if not more.

There are solutions, both long term and short term. In the long run, ideally society needs a clean slate through a cultural and socioeconomic reform to create a healthier, happier and more

sustainable world. Our current society puts money before human health and therefore our diet, education and way of life suffer at the hands of greed. This is something no one person can change and it will not happen overnight but is essential to taking the next step towards a utopian lifestyle.

Though this global change lies far ahead in human history, science may have some answers for us in the near future. Neuroplasticity and Neurogenesis are the studies of training the brain to create new synapses and pathways and potentially create new neurons. These methods influence the hippocampus, which plays a key role in learning and memory in the brain and is linked to anxiety, depression, addiction and neurodegenerative diseases like Parkinson's and Alzheimer's. Anyone can harness the power of Neurogenesis through a healthy diet, regular exercise, meditation and a hearty lifestyle (Aimone et al. 2007). On the more invasive side of medicine, Deep Brain Stimulation (DBS) is proving to be a remarkable treatment option for numerous disorders. DBS uses a thin electrode that is placed into the brain in the area of desired effect and connected to a neurostimulator below the collarbone which acts like a pacemaker, sending off electrical impulses. By stimulating areas of the brain, for example the thalamus, DBS can markedly remove tremors in patients with Parkinson's (Lyons, 2011). It also has been used to effectively treat depression, OCD, dystonia, chronic pain, Tourette's syndrome, epilepsy, aggressive behavior and numerous other illnesses. Further studies show that DBS can help against addictions, obesity, sociopathy and even Alzheimer's. With the substantial success in patients, the future of DBS looks bright as clinical trials are ongoing to improve the safety and efficiency of this procedure.

Ultimately, the future of this epidemic relies on society's cooperation and the prospective science of tomorrow. Though the current state of mental and neurological illnesses looks grim,

the coming decades hope to bring new technologies and methodologies to improve the overall health of the human brain.

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