Development of psychiatric disorders and adverse behaviors: From context to prediction

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It is estimated that more than 10 percent of the world's population live with a psychiatric disorder, with significant impacts on health as well as

major social, human rights and economic consequences in all countries of the world.

Psychiatric disorders cause significant impairment in an individual's daily functioning. These disorders are often difficult and costly to treat, therefore understanding their development is the first step towards improved early identification and prevention measures. With the recent rise of machine learning, the hope is that prediction models will be used in psychiatric clinics to enhance the quality of care and diagnostic process.

In a new thesis from the Department of Medical Epidemiology and Biostatistics, Ph.D. student Ashley Tate first focuses on identifying associations to the development of two severe psychiatric disorders, borderline personality disorder (BPD) and eating disorders. Next, the studies aim to create prediction models to predict mental health problems and adverse behaviors, i.e. aggression and self-harm.

What are the most important result in your thesis?

There are three main important findings in my thesis; First, patients with type 1 diabetes have double the risk for being diagnosed with an eating disorder. Diabetes clinicians should be vigilant for signs of eating disorders in their patients. Second, individuals with BPD have worse physical and mental health and are more likely to have instances of traumatic events, such as being a victim of a violent crime. Individuals with BPD are also more likely to act in a way that can harm themselves or others. Unfortunately, BPD is commonly stigmatized which can worsen treatment outcomes, so empathy is needed for these individuals. And third, although there is considerable hype around machine learning, current models are not yet ready for use in psychiatric clinics.

Why did you choose to study this particular area?

I've always been fascinated by human behavior. It is my hope that understanding why people behave or think a certain way inspires more kindness and empathy than merely labeling them as "ill."

What do you think should be done moving forward in this research area?

There should be more of a focus validating already existing prediction models rather than the creation of new ones.

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