

Hypersexual disorder linked to overactive stress systems

November 2 2015

New research from Karolinska Institutet in Sweden shows that hypersexual disorder – known popularly as sex addiction – can be linked to hyperactive stress systems. In a stress regulation test using the cortisone drug dexamethasone, men with hypersexual disorder showed higher levels of stress hormones than controls, a finding that the researchers hope will contribute to improved therapy for this patient group. The results are published in the journal *Psychoneuroendocrinology*.

Hypersexual disorder, or an overactive sex drive, normally entails obsessive thoughts of sex, a compulsion to perform sexual acts, a loss of control, or sexual habits that carry potential problems or risks. The diagnosis is not uncontroversial, however, since there is often co-morbidity with another kind of mental health issue.

Psychiatrist and researcher Jussi Jokinen has spent many years trying to find the neurobiological causes of mental illness. In the present study, he and his group at Karolinska Institutet's Department of Clinical Neuroscience have used what is known as a dexamethasone test to measure the patients' stress systems. Dexamethasone is a cortisone drug used for depressing the immune system, such as during an anaphylactic shock or an organ transplant; it also serves, however, as a kind of chemical stress test.

The study involved 67 men with hypersexual disorder and 39 healthy matched controls. The participants were carefully diagnosed for

hypersexual disorder and any co-morbidity with depression or [childhood trauma](#). The researchers gave them a low dose of dexamethasone on the evening before the test to inhibit their physiological stress response, and then in the morning measured their levels of [stress hormones](#) cortisol and ACTH. They found that patients with hypersexual disorder had [higher levels](#) of such hormones than the healthy controls, a difference that remained even after controlling for co-morbid depression and childhood trauma.

"Aberrant stress regulation has previously been observed in depressed and suicidal patients as well as in substance abusers," says Professor Jokinen. "In recent years, the focus has been on whether childhood trauma can lead to a dysregulation of the body's stress systems via so-called epigenetic mechanisms, in other words how their psychosocial environments can influence the genes that control these systems."

According to the researchers, the results suggest that the same neurobiological system involved in another type of abuse can apply to people with hypersexual disorder. The next step is to see if the psychotherapy given the patients has helped to normalise their physiological stress response. They also plan to perform epigenetic analyses.

"This is the first study of neurobiological [disorders](#) in this particular patient group," says Professor Jokinen. "It's important to study stress systems in patients with different psychiatric diagnoses in order to understand if these biological changes are diagnosis-specific or related to different behaviours, and to take into account the impact that childhood trauma has on later mental health."

More information: Andreas Chatzitofis et al. HPA axis dysregulation in men with hypersexual disorder, *Psychoneuroendocrinology* (2016). [DOI: 10.1016/j.psyneuen.2015.10.002](https://doi.org/10.1016/j.psyneuen.2015.10.002)

Provided by Karolinska Institutet

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