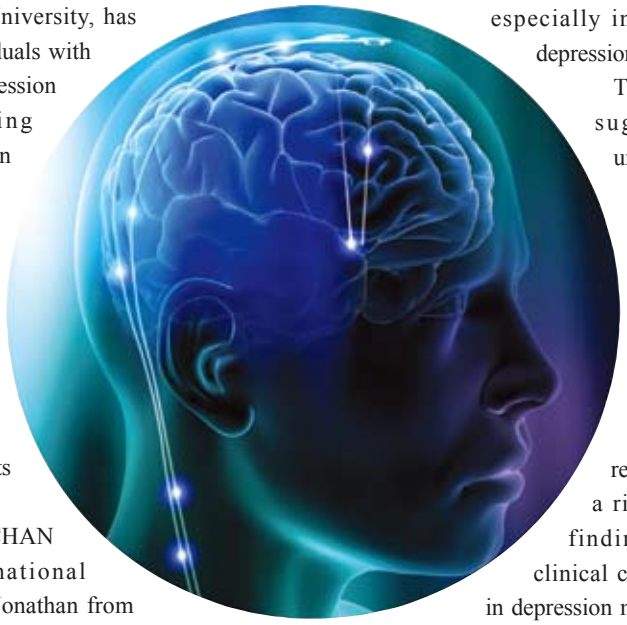
Psychology

Are Relatives of Depression Patients More Prone to the Disease?

Decreased hedonic and motivational capacity, namely anhedonia, is one of the cardinal features for patients with major depressive disorder (MDD). Recent studies suggest that this reduced ability to experience pleasure is also a marker or endophenotype for MDD and represents a genetic predisposition to this disorder. Dr. CHAN Raymond from the CAS Institute of Psychology, with his collaborator Dr. LIU Wenhua from Guangzhou Medical University, has previously shown that individuals with MDD and subsyndromal depression have difficulty sustaining behavior during a known reinforcement schedule. These individuals are less likely to sustain behavior to optimize reward under stress. However, very little is known about the mechanisms underlying this heightened risk in unaffected first-degree relatives of patients with MDD.



In a recent study, Drs. CHAN and LIU and their international collaborator, Prof. ROISER Jonathan from University College London have conducted study to further examine the development of reward bias in 47 unaffected first-degree relatives of patients with MDD and 60 healthy controls. They administered the same set of paradigm and measures they used in their previous study, a probability reward difficult visual discrimination task and self-reported measures of anhedonia and depression. In the probability reward difficult visual discrimination task, participants were instructed about the contingencies in order to elicit a response bias towards the more frequently rewarded stimulus, termed as "reward bias". The unaffected relatives were further classified to individuals with and without subsyndromal depression (depending on the self-reported measure of depression). Their findings showed that these unaffected first-degree relatives of patients with MDD with subsyndromal depression displayed a blunted reward bias comparing to healthy controls. Those relatives without subsyndromal depression displayed largely intact motivational processing on both self-report and experimental measures. The severity of anhedonia was also correlated with attenuated reward bias in first-degree relatives of patients with MDD, especially in those with subsyndromal depression.

Taken together, these findings suggest that a subgroup of unaffected first-degree relatives of patients with MDD can be identified to show reward bias and anhedonia similar to patients with MDD. This subgroup was characterized by the presence of subsyndromal depressive symptoms. Moreover, blunted reward sensitivity may constitute a risk marker for MDD. These findings highlight the existing clinical characterization of anhedonia in depression may represent an aggression of several underlying cognitive constructs and requires further refinement in clinical practice.

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The paper is now available online in *Journal of Affective Disorders*.