

depression screening” and “Hamilton score scale” were used to evaluate the severity of depression.

Results: A total of 260 patients were recruited in our study. The mean age was of 57.36 ± 15.4 years with extremities ranging from 20 to 91 years. The sex ratio M/F was situated at 0.59. The mean diabetes duration was of 10.92 years. The majority of patients had type 2 diabetes (92.3%). The micro vascular long-term complications of diabetes were the most frequent (67.7%): neuropathy (39%), retinopathy (37%) and nephropathy (24%). According to the “DSM-V diagnosis criteria”, 15% of the study population suffered from a Major Depressive disorder (MDD). Hamilton score scale showed that thirty-eight patients had severe depression symptoms (14.6%). Insulintherapy was associated with MDD and depression severity (19.1% vs 10.1% ; $p=0,041$ and 20% vs 8.4% ; $p < 10^{-3}$).

Conclusions: Diabetic patients treated with insulin seem to be exposed to severe depressive syndromes. Once insulin initiated, doctors should be careful at the psychological aspects and the burden of this decision and use in consequence appropriate tools to screen depressive symptoms and anxiety. The role of family doctor is crucial providing early psychological support and preventing complications associated with depression especially poor glycemic control.

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EPP0178

Intergenerational concordance of brain structure between depressed mothers and their never-depressed daughters

F. Minami^{1,2*}, J. Hirano¹, R. Ueda³, A. Takamiya⁴, M. Yamagishi¹, K. Kamiya¹, M. Mimura¹ and B. Yamagata^{1,5}

¹Neuropsychiatry, Keio University School of Medicine; ²Warakukai Medical Corporation; ³Radiation Technology, Keio University School of Medicine, Tokyo, Japan; ⁴Department of Neurosciences, Neuropsychiatry, KU Leuven, Leuven Brain Institute, Leuven, Belgium and ⁵Ebis Medical Clinic, Tokyo, Japan

*Corresponding author.

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Introduction: Parents have significant genetic and environmental influences, which are known as intergenerational effects, on the cognition, behavior, and brain of their offspring. These intergenerational effects are observed in patients with mood disorders, with a particularly strong association of depression between mothers and daughters.

Objectives: The main purpose of our study was to investigate female-specific intergenerational transmission patterns in the human brain among patients with depression and their never-depressed offspring.

Methods: We recruited 78 participants from 34 families, which included remitted parents with a history of depression and their never-depressed biological offspring. We used source-based and surface-based morphometry analyses of magnetic resonance imaging data to examine the degree of associations in brain structure between four types of parent-offspring dyads (i.e. mother-daughter, mother-son, father-daughter, and father-son).

Results: Using independent component analysis, we found a significant positive correlation of gray matter structure between exclusively the mother-daughter dyads within brain regions located in

the default mode and central executive networks, such as the bilateral anterior cingulate cortex, posterior cingulate cortex, pre-cuneus, middle frontal gyrus, middle temporal gyrus, superior parietal lobule, and left angular gyrus. These similar observations were not identified in other three parent-offspring dyads.

Conclusions: The current study provides biological evidence for greater vulnerability of daughters, but not sons, in developing depression whose mothers have a history of depression. Our findings extend our knowledge on the pathophysiology of major psychiatric conditions that show sex biases and may contribute to the development of novel interventions targeting high-risk individuals.

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Major Depressive Disorder in Youth: A Meta-Analysis of Functional Magnetic Resonance Imaging Studies

G. Zamora^{1*}, C. Baten¹, A. M. Klassen¹, J. H. Shepherd¹, E. Pritchard¹, S. Saravia¹, Z. Ali¹, J. Jordan¹, S. K. Kahlon¹, G. Maly¹, M. Duran¹, S. L. Santos¹, A. F. Nimarko², D. W. Hedges³, J. P. Hamilton⁴, I. H. Gotlib², M. D. Sacchet⁵ and C. H. Miller¹

¹Psychology, California State University, Fresno; ²Psychology, Stanford University, Stanford; ³Psychology, Brigham Young University, Provo, United States; ⁴Biomedical and Clinical Sciences, Linköping University, Linköping, Sweden and ⁵Meditation Research Program, Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Boston, United States

*Corresponding author.

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Introduction: Major depressive disorder (MDD) is a highly prevalent mental illness that frequently originates in early development and is pervasive during adolescence. Despite its high prevalence and early age of onset, our understanding of the potentially unique neural basis of MDD in this age group is still not well understood, and the existing primary literature on the topic includes many new and divergent results. This limited understanding of MDD in youth presents a critical need to further investigate its neural basis in youth and presents an opportunity to also improve clinical treatments that target its neural abnormalities.

Objectives: The present study aims to advance our understanding of the neural basis of MDD in youth by identifying abnormal functional activation in various brain regions compared with healthy controls.

Methods: We conducted a meta-analysis of functional magnetic resonance imaging (fMRI) studies of MDD by using a well-established method, multilevel kernel density analysis (MKDA) with ensemble thresholding, to quantitatively combine all existing whole-brain fMRI studies of MDD in youth compared with healthy controls. This method involves a voxel-wise, whole-brain approach, that compares neural activation of patients with MDD to age-matched healthy controls across variations of task-based conditions, which we subcategorize into affective processing, executive functioning, positive valence, negative valence, and symptom provocation tasks.

Results: Youth with MDD exhibited statistically significant ($p < 0.05$; FWE-corrected) hyperactivation and hypoactivation in multiple brain regions compared with age-matched healthy controls. These results include significant effects that are stable across