Results: Eight studies met eligibility criteria and were analysed for reported changes in outcome measures used to assess the symptoms of psychiatric illness and the tolerability of treatment. All Major Depressive Disorder (MDD) (n=5) and Generalized Anxiety Disorder (GAD) (n=1) studies found adjuvant probiotic or synbiotic treatment to be more efficacious in improving the symptoms of psychiatric illness than the first-line treatment alone or with placebo. The schizophrenia studies (n=2) found adjuvant probiotic treatment to have no significant difference in clinical outcomes, but it was found to improve the tolerability of first-line antipsychotics.
Conclusions: The findings of the studies included in this review suggest the use of adjuvant probiotic treatment with selective serotonin reuptake inhibitors (SSRIs) for MDD and GAD to be superior to SSRI treatment alone. Probiotic adjuvant treatment with antipsychotics could be beneficial for improving the tolerability of the antipsychotics, but these findings do not suggest that adjuvant probiotic treatment would result in improved clinical outcomes for symptoms of schizophrenia.

Disclosure of Interest: None Declared

EPP0230

Vocal music and brain plasticity_a literature review

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Introduction: Vocal music has been a way for the expression of beautiful human emotions and gives a consolidated framework to words. Our review is centered on finding neuroplastic changes in exposure to music.
Objectives: Our main Objective is to identify structural brain changes in different brain areas. Identification of motor and sensory changes that are produced in response to vocal music.
Methods: Detailed literature review was conducted using Pubmed and Google Scholar databases. The literature search was narrowed down to cover the research topic with the search terms [plasticity] OR [brain] OR [neurons] OR [music] OR [vocal]. Our Inclusion criteria included studies with effects of vocal music on neuronal plasticity regardless of age, gender, duration of training, type of training, medium of lanuage and profession. Exclusion criteria included instrumental music and forms of music other than vocal music.
Results: Results showed that music impacts areas of the brain that are highly associated with human emotions. Any brain area can undergo neuroplasticity but is most commonly seen in the insular areas, paracortex, putamen, amygdala, and white matter. Music therapy promotes the formation of instant neural networks and the release of neurotransmitters like serotonin and dopamine. These microscopic changes increase depending on the duration of exposure to vocal music. Later, it appears as macroscopic changes visible with the help of neuroimaging. There is also a significant difference in the brain changes of vocalists and non vocalists. Vocal music impacts the left side of the cortex. Music activates reward system in the brain that leads to stimulation of dopaminergic pathways. It helps in neuronal division in post strock and post traumatic brain injury patients.
Conclusions: Music therapy is widely used as the rehabilitative process that combines music with therapeutic medications to promote therapeutic alliance and better results. It is used to direct focus toward the fulfillment of the emotional and cognitive needs of patients with psychiatric ailments. This area is needed to be explored more so that vocal music can be used for integrated therapy.
Keywords: Vocal music; Brain changes; neuroplasticity; therapy.

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EPP0231

Psychiatric Manifestations of Iron Deficiency Anemia-A Literature Review

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Introduction: Anemia due to iron deficiency is a highly prevalent medical condition in women and children. Iron deficiency presents with fatigue, low mood, anxiety, restlessness, palpitations, and headache. Poor nutritional intake can be the reason of iron deficiency in underprivileged populations. It can lead to behavioral symptoms that can manifest as chronic psychiatric ailments.
Objectives: Our objective is to consolidate manifestations of iron deficiency anemia concerning psychiatric ailments. We will figure out if it impacts the severity of psychiatric symptoms. We aim to find out if there are any underlying factors that impact the correlation of iron deficiency with psychiatric disorders like depression, anxiety, sleep disorders, and restless leg syndrome.
Methods: Detailed literature review conducted using PUBMED, OVID, GOOGLE SCHOLAR with the search terminologies [iron] OR [sleep disorders] OR [depression] OR[deficiency] OR [anxiety] OR [ADHD] OR [VITAMINS] OR[PICA] OR [CHILDREN] OR [women] OR [antidepressants] OR [sleep medicine] OR [antipsychotics] that yielded 150 results that were narrowed down to be focused on our research area. Inclusion criteria included studies with participants with iron deficiency anemia regardless of age group, gender, economic and social background. Exclusion criteria included patients with normal hemoglobin levels.
Results: Results yielded a positive impact of treating iron deficiency anemia in patients with psychiatric ailments. The symptoms of low mood, fatigue, anxiety, anhedonia, and sleeplessness get better as iron deficiency improves. According to the search, some physicians misdiagnose iron deficiency as depression. Antidepressants were found to be working better when added with iron supplements. Restlessness and palpitations can also be the manifestations of iron deficiency. Patients with underlying iron deficiency are more predisposed to developing psychiatric disorders. According to published data, restless leg syndrome was found to be associated with iron deficiency. Some psychiatric drugs can lead to iron deficiency and can provoke underlying iron deficiency even more. Iron deficiency impacts memory areas of the brain like the hippocampus and prefrontal cortex.