

moreover people with serious mental illness have higher rates of mortality and morbidity. (Patrick W. Corrigan, et al., 2014). The contact mental-health-care professionals have with people with mental illness is associated with positive attitudes towards civil rights, however it does not reduce stigma as does social contact such as with friends or family members with mental illness. (Henderson C et al., 2014)

**Objectives:** This is the Albanian substudy of a larger multicenter study. We aimed to investigate the attitudes of specialists and trainees in psychiatry in Albania.

**Methods:** An anonymous online questionnaire was sent by email to the participants. We used questions on sociodemographic and professional details as well as requested personal information regarding their lived experience. The self reporting Opening Minds Stigma Scale for Health Care Providers was used to measure stigmatising attitudes, which contains 15-statements and 3-subscales: Attitude, Disclosure and Help-seeking and Social distance.

**Results:** Altogether 59 professionals completed the questionnaire, 59% of them worked as adult (n=35) and 41% as child psychiatrists (n=24). 58% were specialists (n=34) and 41% trainees (n=24). Based on their responses, 12% of them (n=7) have ever sought help for their own mental health problems. Regarding case discussion, supervision or Balint groups, 81% of the sample (n=48) was open to these; however, it was accessible for only 46% of the sample. The median stigma scores were the followings: attitude: 13 (11-16), Disclosure: 10 (9-12) and Social distance: 12 (9-13), total score: 35 (31-40); however, none of these were associated with any of the above variables.

**Conclusions:** Stigma is present towards people with mental health problems and psychiatrist play their part in it as well. Further investigation is needed into Albanian psychiatrists' stigmatising attitudes to find appropriate anti-stigma interventions for them.

**Disclosure of Interest:** None Declared

## EPP0227

### Stigma and contact with mental illness in a university population through volunteering: a case-control study

A. Madoz-Gúrpide<sup>1,2,3\*</sup>, E. Ochoa Mangado<sup>1,2,3\*</sup> and P. Cuadrado del Rey<sup>2</sup>

<sup>1</sup>Psychiatry Service, Ramón y Cajal University Hospital; <sup>2</sup>Alcalá University and <sup>3</sup>Ramón y Cajal Institute for Health Research (IRYCIS), MADRID, Spain

\*Corresponding author.

doi: 10.1192/j.eurpsy.2023.557

**Introduction:** Stigma in mental illness has a negative impact on the daily functioning of the patient, their personal development and their clinical prognosis. Direct contact with people who suffer from this pathology could modify the stigma towards these populations.

**Objectives:** The objective of the study is to assess whether the stigma of mental illness in university students is modified by contact with people suffering from mental illness, established through volunteering activities with that population.

**Methods:** Observational case-control study. The sample is made up of young subjects (18 to 35 years old) who have studied or are studying a university degree during the 2021-2022 academic year. The cases (n=91) are subjects who have ever volunteered with people diagnosed with mental illness. Those who have not had this experience constitute the control group (n=237).

The variables were collected by completing an anonymous online questionnaire. To analyze stigma, the Attribution Questionnaire-27 questionnaire was used, which offers a total score as well as 9 domains related to stigma. Statistical analysis (including multiple linear regression) was performed with the statistical package IBM SPSS Statistics, version 20.

**Results:** Once adjusted for age and gender, the case group scores lower, with statistically significant differences, in the subscales Anger (p-value: 0.001), Dangerousness (p-value: 0.000), Fear (p-value: 0.000), Coercion (p-value: 0.028), Segregation (p-value: 0.000), Avoidance (p-value: 0.000), as well as in the Total Score (p-value: 0.000). Likewise, it is also observed that the group of cases score higher on the Help subscale (p-value: 0.002).

Model	Coefficients		t	Sig.	95% Confidence Interval for B		
	Unstandardized Coefficients	Standardized Coefficients			Lower limit	Upper Limit	
	B	Std. Error	Beta				
(Constant)	72,745		10,931		6,655	,000	51,234 94,256
Volunteering	13,100		3,196	,236	4,098	,000	6,810 19,391
Age	,669		,342	,113	1,956	,051	-,004 1,342
Gender	-,196		2,941	-,004	-,067	,947	-5,983 5,591

a. Dependent Variable: Total Score

**Conclusions:** Previous contact with patients with mental illness through voluntary activities seems to favor less stigma towards mental pathology.

**Disclosure of Interest:** None Declared

## EPP0228

### Probiotics as Adjuvant Treatment for Psychiatric Disorders: A Systematic Review

E. A. Forth<sup>1,2,3\*</sup>, B. Buehner<sup>1</sup>, A. Storer<sup>1</sup>, C. Sgarbossa<sup>1,2,3</sup>, R. Milev<sup>1,2,3,4</sup> and A. Chinna Meyyappan<sup>1,2,3</sup>

<sup>1</sup>Centre for Neuroscience Studies; <sup>2</sup>Department of Psychiatry, Queen's University; <sup>3</sup>Department of Psychiatry, Providence Care Hospital and <sup>4</sup>Department of Psychology, Queen's University, Kingston, Canada

\*Corresponding author.

doi: 10.1192/j.eurpsy.2023.558

**Introduction:** Many psychiatric illnesses have been linked to the gut microbiome, with supplements such as probiotics showing some efficacy in alleviating the symptoms of some psychiatric illnesses. Though probiotics alone have been found to be efficacious in alleviating the symptoms of psychiatric illnesses, the combination of probiotics and first-line psychotropic medications has not been investigated as thoroughly.

**Objectives:** The primary objective of this review was to evaluate the current literature investigating the effects of adjuvant probiotic or synbiotic administration in combination with first-line psychotropic treatments for psychiatric illnesses.

**Methods:** A systematic search of four databases was conducted using key terms related to treatments for psychiatric illnesses, the gut microbiome, and probiotics. All results were then evaluated based on specific eligibility criteria. The salient outcome measures from the studies that met this eligibility criteria were then extracted and analysed.

**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

H. Arshad<sup>1\*</sup>, G. Muhammad<sup>2</sup>, A. R. Khan<sup>3</sup> and A. Arshad<sup>4</sup>

<sup>1</sup>Psychiatry, Jinnah Sindh medical university; <sup>2</sup>Medicine, Karachi Medical and Dental College, Karachi, Pakistan; <sup>3</sup>Psychiatry, Carilion Clinic Virginia Tech., Virginia, United States and <sup>4</sup>Medicine, Jinnah Sindh Medical University, Karachi, Pakistan

\*Corresponding author.

doi: 10.1192/j.eurpsy.2023.559

**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 language 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 stroke 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.

**Disclosure of Interest:** None Declared

## EPP0231

### Psychiatric Manifestations of Iron Deficiency Anemia-A Literature Review

H. Arshad<sup>1\*</sup>, A. Arshad<sup>2</sup>, M. Y. Hafiz<sup>3</sup>, G. Muhammad<sup>4</sup>, S. Khatri<sup>5</sup> and F. Arain<sup>6</sup>

<sup>1</sup>Psychiatry; <sup>2</sup>Medicine, Jinnah Sindh Medical University; <sup>3</sup>Psychiatry, Aga Khan University Hospital; <sup>4</sup>Medicine, Karachi Medical And Dental College, Karachi, Pakistan; <sup>5</sup>Psychiatry, Ocean Medical Center and <sup>6</sup>Psychiatry, Rutgers New Jersey School of Medicine, New Jersey, United States

\*Corresponding author.

doi: 10.1192/j.eurpsy.2023.560

**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.