EPP0601

Music therapy and depression : the alternative approach

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doi: 10.1192/j.eurpsy.2023.900

Introduction: Depression is a highly prevalent disorder associated with reduced social functioning, impaired quality of life, and increased mortality. This disease is one of the most common reasons for the use of complementary and alternative therapies. Music therapy is a therapeutic approach that uses musical interaction as a means of communication and expression.
Objectives: To assess, through a systematic review, the effectiveness of music therapy in patients with depression disorder, and to design a research protocol for a randomised controlled trial of group music therapy for depressed patients in a Psychiatry Department.
Methods: We conducted a systematic review based on the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA).We systematically searched 3 databases (Pubmed, Google Scholar and SciElo) and reviewed randomized controlled trials. The evaluation of the trials was made using the CONsolidated Standards of Reporting Trials (CONSORT) guidelines.The review included studies of 16-to-80-year-old impatients and outpatients of both genders with clinical depression using any diagnostic criteria such as ICD 10 (WHO 1992) or DSM 5 Research Diagnostic Criteria. Change in depressive symptoms was measured with various scales. An experimental protocol was then designed to conduct a randomized controlled trial for depressed patients in the Psychiatry Department at the University Hospital of Mahdia, seeking to supplement scientific knowledge in the field of music therapy that has not yet been explored.
Results: A total of 13 articles were included in the study: The analysis of these articles highlighted a predominance of Anglo-Saxon papers and an increasing rate of publication over time.The duration of treatment varied between 2 weeks and 10 weeks and the number of music therapy sessions varied between 4 sessions and 20 sessions.Two major music therapy approach were identified, active method where patients are the ones making music and receptive or passive methods where patients will receive the music.12 researches included in our review reached the conclusion that music therapy had a significant positive effect on patients as the score scales were significantly lower after the end of the therapy. Only one included research found no significant difference between music therapy group and treatment as usual.In addition the results of all studies came on the conclusion that music therapy improved symptoms of anxiety and scores were significantly lower.
Conclusions: This systematic review and meta-analysis suggests that music therapy has an effect on reducing depressive symptoms to some extent. However, high-quality trials evaluating the effects of music therapy on depression are required. Thus,the aim of our study protocol is to contribute to the development of this therapy

Disclosure of Interest: None Declared

EPP0602

The Association between Mood, Inhibitory Control and Depressive Symptoms: An Ecological Momentary Assessment Study

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doi: 10.1192/j.eurpsy.2023.901

Introduction: Cognitive models of depression highlight the role of inhibitory control - the cognitive control ability which supports our goal directed behavior – as key and even causal feature of the disorder. According to these models, deficits in inhibitory control prevent the exclusion of irrelevant negative information, leading to rumination and sustained negative mood which result in depressive episodes. However, the scientific evidence linking deficits in inhibitory control to depression is thus far mixed. Moreover, although one's inhibitory control ability may fluctuate, it is often assessed using a single-time measurement in the lab.
Objectives: Here we aimed to assess the association between intra-individual fluctuations in inhibitory control measured in ecological settings, daily mood states, and depressive symptoms.
Methods: N=106 participants (Mean age: 38 $\pm$ 10 years; range: 19-62 years; 68% female) reported their depressive symptoms (using the PHQ-9 scale) and completed a mobile version of the Go-NoGo inhibition task at baseline. They then completed a 5-day ecological-momentary-assessment (EMA) protocol, in which they reported their current mood (using the IMS-12 scale) and performed a shortened version of the Go-NoGo task twice/day using a mobile application. Depressive symptoms were assessed again following the 5-day EMA. Hierarchical-linear-modeling (HLM) was applied to examine the association between momentary IC and mood, with post-EMA depressive symptoms as a moderator. Inhibitory control was included as a time-varying predictor for mood in the 1st step, and depressive symptoms post-EMA and their interaction with inhibition were included in the 2nd step.
Results: At baseline, there were no correlations between depressive symptoms and inhibitory control (r_p = .035, n.s). However, individuals with elevated depressive symptoms demonstrated worse and more variable inhibition performance over time (r_p = .29, p = .002), as captured in the EMA measures. In addition, participants with more variable inhibitory control performance over time also reported more depressive symptoms at the end of the 5-day period (r_p = .27, p = .006). Finally, post-EMA depressive symptoms moderated the association between momentary inhibitory control and daily mood, such that reduced inhibition was associated with more negative mood only for those with lower, but not with higher, depressive symptoms (Figure 1).

https://doi.org/10.1192/j.eurpsy.2023.901 Published online by Cambridge University Press

Image:

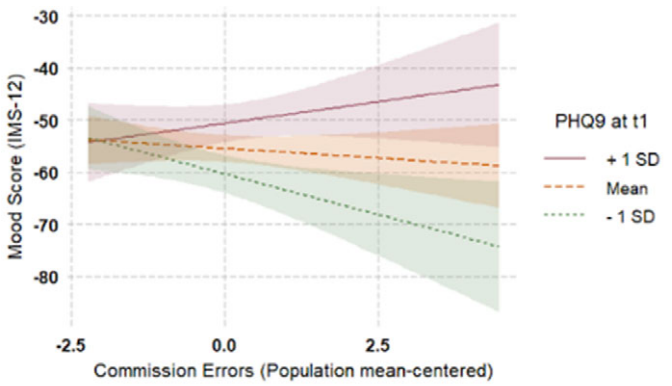


Figure 1. The interaction between momentary inhibition (commission errors) and depressive symptoms post-EMA in prediction of momentary mood reports (IMS-12) during the EMA.

Conclusions: Variable, rather than mere reduced inhibitory control is related to depressive symptoms. Moreover, the role of inhibition in modulating mood differs in non-depressed vs. depressed individuals. These findings contribute to our understanding of inhibition and mood in real life and help account for some of the discrepant findings related to cognitive control models of depression. Future investigations should examine the validity of these outcomes in other, clinical samples.

Disclosure of Interest: None Declared

EPP0603

Comparison of Machine Learning Algorithms For Beck Depression Inventory Measured Depression Status Classification

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doi: 10.1192/j.eurpsy.2023.902

Introduction: Depression is a psychiatric disorder characterized by low mood and anhedonia. The diagnosis of depression and the initiation of treatment is important for improving quality of life and avoiding disability. Machine learning (ML), can be used for solving classification and regression problems.In this study, scores of multiple psychiatric scales were used to detect depression and different ML algorithms were used to study if they can help for diagnosing depression accurately.

Objectives: The purpose of the study is to detect with high accuracy whether people are depressed or not by using widely used ML algorithms. It is also aimed to compare the algorithms used to predict depression with each other.

Methods: Data were collected from 96 university students. Beck Depression Inventory (BDI), Beck Anxiety Inventory, Neo Personality Inventory, Chronic Stress Scale (CSS), Perceived Stress Scale (PSS), Childhood Trauma Questionnaire, Post-Traumatic Stress Disorder Checklist (PTSD), SHAPS, Relationship Scales Questionnaire and Dissociative Events Scale were applied. 14 points from the BDI was accepted as the cut-off value as depressed. Total scores of each scale was used as the dependent variable in the Xgboost (XGB) to classify the depression. By XGB, the most important 4 of these surveys and scales were selected to use in the Non-Linear (NL) models such as XGB, Decision Trees (DT), Support Vector Machines (SVM), K-Nearest Neighbor (KNN). Lastly, a linear model as a Logistic Regression (LR) model was also used to compare with the NL algorithms. The success of the models was measured with the Cross Validation method, which is the gold standard in ML.

Results: In the model in which all measurements are used as Independent Variables (IV), the XGB highlighted 4 scale scores: these are CSS, PSS, SHAPS and PTSD. All scale scores were used as IV, both XGB and DT classified depression with a success of 87.5%, while this score increased to 89.6% in both models when 4 prominent scales' scores were used as IV. In the KNN, the classification made with prominent scales increased the success from 83% to 86%. The variance explanation rate of the LR model using 4 prominent scales remained at 58%.

Conclusions: With ML's ability to solve NL relationships and dimensional reduction ability, models in which a large number of variables are input and there is no high correlation between dependent variables and IV can be classified with high success. Also, the success of the models was increased by choosing the most importants of the many IV and the variables that contributed negatively to the model could be excluded. The use of ML can yield promising results in fields such as psychiatry where linear relationships cannot be observed much.

Disclosure of Interest: None Declared

EPP0604

A 28-Day, Randomized, Controlled, Single-Blind, Phase 2 Study in Treatment-Resistant Major Depressive Disorder (TRD) Patients Receiving Intranasal Esketamine Comparing Addition of Almond Therapy TM with Treatment-as-Usual (TAU)

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doi: 10.1192/j.eurpsy.2023.903

Introduction: Treatment Resistant Depression (TRD) occurs in up to 30% of patients with Major Depressive Disorder (MDD). New treatments are clearly needed and there is a burgeoning interest in novel agents including ketamine. While ketamine in various formulations has been demonstrated to have a robust antidepressant effect there is a lack of evidence-based psychotherapies specifically designed for combination use.