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## IFMAD 2025 Forum Abstracts

### P.01 PREVENTIVE EFFECT OF ARIPIRAZOLE ONCE-MONTHLY ON RELAPSE INTO MOOD EPISODES IN BIPOLAR DISORDER: A MULTICENTER, ONE-YEAR, RETROSPECTIVE, MIRROR IMAGE STUDY

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**Background/Aims:** Given the high risk of relapse, most BD patients require continuous maintenance therapy. In Korea, AOM is approved for monotherapy in the maintenance treatment of BD when administered via intramuscular injection at four-week intervals. We conducted a one-year, retrospective, mirror-image study to investigate the clinical effectiveness and safety of aripiprazole once monthly (AOM) in patients with bipolar disorder (BD). We compared pretreatment conditions with outcomes after 12 months of AOM treatment.

**Methods:** Seventy-five bipolar patients were recruited from 12 hospitals in Korea. We included 75 patients with BD who had received at least three AOM treatments from September 2019 to September 2022 and had accessible electronic medical record (EMRs) for the year before and after the baseline visit. The study involved reviewing EMRs of subjects meeting the inclusion criteria and analyzing data related to the baseline visit, including sex, age, education, employment, age at onset, comorbid psychiatric and physical disorders, family history of psychiatric disorders, and history of psychiatric hospitalization. Furthermore, data were collected on the numbers of past manic, hypomanic, and depressive episodes. Clinical Global Impression for Bipolar Disorder-Severity (CGI-BP-S), Clinical Global Impression-Clinical Benefit (CGI-CB), and Global Assessment of Functioning (GAF) scores and data on the number of prescribed psychiatric pills and medications other than AOM during the one-year period before (pre-AOM) and after (post-AOM) the baseline visit were recorded

**Results:** The overall number of mood episodes significantly decreased from a mean of  $1.5 \pm 1.2$  episodes preAOM to  $0.5 \pm 1.2$  episodes post-AOM. Manic episodes significantly decreased from  $0.8 \pm 0.8$  episodes preAOM to  $0.2 \pm 0.5$  episodes post-AOM, and depressive episodes significantly decreased from  $0.5 \pm 0.8$  episodes pre-AOM to  $0.2 \pm 0.6$  episodes post-AOM ( $p = 0.017$ ). Moreover, at week 52, the number of psychiatric medications decreased significantly to  $2.3 \pm 2.1$  ( $p < 0.001$ ) and the number

of pills decreased significantly to  $3.6 \pm 3.5$  ( $p < 0.001$ ) compared to baseline. Notably, 16 subjects (21.3 %) were receiving AOM monotherapy at week 52 ( $p < 0.001$ ). The prevalence of complex polypharmacy, defined as the use of three or more medications (Nierenberg et al., 2016), decreased significantly from 78.7 % ( $n = 59$ ) at baseline to 37.3 % ( $n = 28$ ) at week 52 ( $p < 0.001$ ).

**Conclusions:** In the present study, the administration of AOM significantly reduced the recurrence rates of overall mood episodes, manic episodes, and depressive episodes during the year after AOM administration compared to the year before its administration. In addition to this, comparing AOM administration with one year prior and at baseline, there was significant improvement in GAF, CGI-BP-S-mania, and CGIBP-S-overall scores. The results of this study suggest that AOM can reduce mood episode relapse and may be clinically beneficial in the treatment of BD patients, potentially reducing issues associated with polypharmacy in some individuals. The small sample size was insufficient to fully represent the entire population of individuals with BD, and potential selection bias was introduced due to only including subjects who received AOM three or more times.

Conflict of interest(s) (if any – not included in the 500 words): This study was supported by an investigator-initiated grant from Korea Otsuka Pharmaceutical Co., Ltd.

## P.02 PREDICTORS OF 1-YEAR REHOSPITALIZATION FOR PATIENTS WITH MAJOR DEPRESSIVE DISORDER

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**Background/Aims:** This study aimed to assess the clinical characteristics of patients with major depressive disorder who were rehospitalized within 1 year and whether the 1-year rehospitalization rate varies depending on the type of medication and treatment method.

**Methods:** A total of 531 patients hospitalized for major depressive disorder were assessed for clinical characteristics. The use and type of antidepressants, antipsychotics, mood stabilizers, and hypnotics were assessed.

**Results:** Of the 531 subjects, 68 (12.8%) were rehospitalized within a year. The number of past depressive episodes ( $1.56 \pm 2.67$  vs  $0.90 \pm 1.18$ ) ( $p=0.048$ ) and the number of previous psychiatric hospitalizations ( $0.82 \pm 1.93$  vs  $0.29 \pm 0.83$  times) ( $p=0.029$ ) was high in the 1-year rehospitalization group. The rate of family history of mood disorder (25.0% vs 13.6%) ( $p=0.014$ ) and the rate of comorbid personality disorder (16.2% vs 8.6%) ( $p=0.049$ ) was also high in the 1-year rehospitalization group. Multiple logistic regression analysis showed that the number of previous psychiatric hospitalizations affected the rate of 1-year rehospitalization ( $p=0.00$ ).

**Conclusions:** The number of previous psychiatric hospitalizations could be used for prediction of rehospitalizations of major depressive disorder patients within one year. In addition, family history of mood disorders and comorbidity of personality disorders may affect the rehospitalizations of patients.

### P.03 AUTISTIC TRAITS AS PREDICTORS OF PSYCHOLOGICAL DISTRESS IN INDIVIDUALS WITH AUTISM SPECTRUM DISORDER

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**Background/Aims:** A growing body of evidence suggests that the risk of suicidal behaviors-including completed suicide, suicide attempts, planning, and ideation-is approximately three times higher in individuals with autism spectrum disorder (ASD) compared to the general population. This increased risk is thought to be linked to various ASD-related symptoms, such as social isolation, depression, anxiety, and sensory hypersensitivity. These symptom manifestations likely contribute to heightened psychological distress, which may, in turn, play a critical role in suicidal thoughts and behaviors. Therefore, examining the relationship between ASD symptomatology and psychological distress holds significant clinical relevance for understanding suicidal behaviors in ASD. The present investigation had two main objectives: (1) to compare psychological distress levels between individuals with ASD and typically developing (TD) individuals, and (2) to explore the relationship between autistic traits and psychological distress using a dimensional approach, both across the entire sample and within each group separately.

**Methods:** Forty-seven adults participated in the study (23 ASD, 24 TD). All adults with ASD were diagnosed based on the DSM-5 criteria. The severity of psychological distress was characterized by the total score on the Symptom

Checklist-90R (SCL-90R) scale. ASD traits were assessed by the Autism-Spectrum Quotient scale (AQ), a widely used instrument to measure the expression of autism-spectrum symptoms. The questionnaire comprises 50 items, in five subscales: Social Skills, Attention Switching, Attention to Detail, Communication, and Imagination. General Linear Model analysis was used to examine the differences between the study groups in psychological distress. Regression analysis was used to investigate the association between a psychological distress level and autistic traits.

**Results:** In terms of group differences, ASD subjects had significantly ( $p<0.05$ ) higher severity of psychological distress and higher total and subscale scores on the AQ scale. Our dimensional analysis indicated significant positive association between the level of distress and the severity of autistic traits. The level of distress increased with the level of trait-severity, an association which was observed in both study groups. The investigation of the individual subscales of the AQ showed that the association was most pronounced with respect to the attention switching subscale in both groups.

**Conclusions:** Our results suggest that in adults with ASD, symptom severity and psychological distress are significantly higher than in the TD group. Difficulty in the attention-switching dimension showed the strongest significant positive association with psychological distress, both in the dimensional approach and across groups. While no prior reports have specifically examined the association between attentional switching and psychological distress in ASD, our findings align with previous research on persistent depression. Studies suggest that high levels of autistic traits are commonly observed in adults with depression and that elevated "attention switching" scores on the AQ may predict the persistence of depressive symptoms (a key risk factor for suicidal behaviors). Based on these findings, implementing interventions aimed at enhancing attentional flexibility could be recommended, as they may help alleviate psychological distress and reduce suicide risk.

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## P.04 DIFFICULTIES IN EMOTION REGULATION ARE MORE STRONGLY ASSOCIATED WITH ATTACHMENT ANXIETY THAN ATTACHMENT AVOIDANCE

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**Background/Aims:** Emotion regulation has a significant impact on our daily lives. It contributes to the success of our interpersonal relationships, our mental health quality and overall well-being. Studies including the Adult Attachment Interview (AAI) have shown that individual differences in adult attachment patterns affect how emotions are expressed and experienced. Nevertheless, attachment style and emotion regulation have rarely been examined together. The aim of our research is to explore in more detail the link between attachment anxiety, attachment avoidance and emotion regulation.

**Methods:** A total of 928 individuals in a general population sample were assessed using the Experiences in Close Relationships-Revised (ECR-R) and Difficulties in Emotion Regulation Scale (DERS). Data were analysed using Pearson correlation.

**Results:** Attachment anxiety showed a significant moderate positive correlation with difficulties in emotion regulation ( $r=0.621$ ). Examining the relationship between attachment anxiety and components of emotion regulations as reflected by the DERS subscales separately, we found significant weak positive correlation with Nonacceptance of Emotional Responses ( $r=0.495$ ), Difficulties Engaging in Goal-Directed Behavior ( $r=0.421$ ), and Lack of Emotional Clarity ( $r=0.398$ ); and moderate positive correlation with Impulse Control Difficulties ( $r=0.527$ ); and Limited Access

to Emotion Regulation Strategies ( $R=0.596$ ); and significant but negligible correlation with Lack of Emotional Awareness ( $r=0.289$ ).

Attachment avoidance, on the other hand, showed a significant but only weak positive correlation with difficulties in emotion regulation ( $r=0.317$ ). Investigating the relationship between attachment avoidance and individual components of emotion regulation as reflected by each DERS subscale showed significant but weak positive correlations in case of Lack of Emotional Awareness ( $r=0.371$ ) and Lack of Emotional Clarity ( $r=0.373$ ); and significant but negligible correlation with Nonacceptance of Emotional Responses ( $r=0.228$ ), Difficulties Engaging in Goal-Directed Behavior ( $r=0.080$ ), Impulse Control Difficulties ( $r=0.181$ ), and Limited Access to Emotion Regulation Strategies ( $r=0.266$ ).

**Conclusions:** Our results suggest that there is a relevant relationship between emotion dysregulation and attachment anxiety, however, only a weak association could be observed for attachment avoidance. Our results may help to identify important targets for screening and intervention for improving emotion regulation. Our findings should be further investigated in anxiety and affective disorder patients.

**Keywords:** attachment style, attachment avoidance, attachment anxiety, emotion regulation, emotion dysregulation

## P.05 TIMING MATTERS: EFFECTS OF CONTINGENCY INSTRUCTIONS ON EXTINCTION LEARNING AND CONTEXT-DEPENDENT RETURN OF FEAR

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**Background/Aims:** Patients with anxiety disorders (AD) and highly anxious individuals demonstrate accelerated fear conditioning and diminished fear extinction (Duits et al., 2015), which underscores the critical necessity of improving extinction learning mechanisms in clinical populations. Previous research has shown that safety instructions given prior to extinction training, explicitly stating that the unconditioned stimulus (UCS) will not be presented, can improve extinction learning (Luck & Lipp, 2016). Additionally, studies have suggested that relapse of fear can be reduced by repeating instructions before extinction retrieval (Javanbakht et al., 2017). However, providing instructions immediately before retrieval is not practically applicable in therapeutic settings, as therapists are not present during post-therapy periods. This study investigates how the timing of safety instructions influences extinction learning, retrieval, and fear reinstatement in AD patients and healthy controls.

**Methods:** An experimental design was employed involving 240 participants (120 patients with ADs and 120 healthy controls) who underwent a sequential conditioning paradigm across three consecutive days, encompassing acquisition, extinction training, extinction retrieval, and

reinstatement test. Participants were randomly assigned to different instruction conditions: receiving instructions before extinction, after extinction, both before and after extinction, or no instructions at all. The experimental stimuli consisted of electrical shocks as unconditioned stimuli (UCS) and lamp colors as conditioned stimuli (CS), with skin conductance responses (SCRs), CS valence, and UCS expectancy ratings as readout measures.

**Results:** The results revealed nuanced findings across different experimental phases. While patients with ADs and healthy controls exhibited comparable fear acquisition, patients consistently displayed higher UCS expectancy and more negative CS valence ratings. Instructions provided before extinction training significantly enhanced extinction learning for both groups. Additionally, instructed healthy controls demonstrated lower skin conductance responses compared to instructed patients, particularly during the first half of extinction training.

During extinction retrieval, the instruction timing revealed complex effects. Participants who received instructions after extinction training showed equally high SCRs for both CSs, whereas the uninstructed group and the group receiving pre-extinction instructions maintained significant differentiation in their responses. Notably, the group receiving instructions both before and after extinction training showed lower UCS expectancy compared to the group receiving instructions only before extinction training.

The timing of safety instructions differentially influenced SCRs during the reinstatement test across various contexts. Specifically, participants instructed both before and after extinction, as well as uninstructed participants, demonstrated higher fear responses in the original conditioning context. In contrast, participants instructed only before extinction training exhibited heightened fear responses in both the extinction and novel contexts, while those instructed only after extinction training showed increased fear exclusively in the extinction context.

**Conclusions:** The study reveals promising effects of contingency instructions on extinction learning and retrieval, though the patterns of fear return after reinstatement remain complex. These findings provide nuanced insights into the complex mechanisms of fear learning, extinction, and potential therapeutic interventions for ADs, highlighting the potential of strategic information provision in modulating fear responses. Future research should explore the long-term clinical applicability of instructional interventions in anxiety treatment.

## P.06 THE EFFICACY OF MOBILE AND WEARABLE TECHNOLOGIES IN MONITORING ADOLESCENT MOOD DISORDER SEVERITY

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**Background/Aims:** This study aims to determine whether self-rating scores obtained through mobile applications and ecological momentary assessment data obtained through wearable devices can predict the severity of adolescent mood disorders.

We have collected self-ratings of mood state via a mobile application from adolescents diagnosed with mood disorders and biomarkers obtained via wearable devices. We then analyzed how accurately the collected variables can predict the clinician rating scales.

**Methods:** A total of 19 patients with mood disorders were initially enrolled in the study. Participants were

between the ages of 13 and 18 and no history of other neurodevelopmental or neurologic disorders. Patients were clinically diagnosed with mood disorders based on the DSM-5 by child and adolescent psychiatrists. They were required to wear Fitbit devices for two months to collect various data on activity and sleep. They were asked to rate their mood and anxiety status every other week using a mobile application developed for this study. The participants also attended regular monthly clinic visits for clinician rating.

**Results:** By extracting 29 key features that can serve as biomarkers, we have developed a model to predict the worsening of the participants' Hamilton Depression Rating Scale (HAMD) and Young Mania Rating Scale (YMRS) scores. The model utilized a random forest technique, and the model performance showed a prediction performance of  $R^2$  of 0.829 and 0.874, respectively. Furthermore, we have improved the model performance by utilizing self-rating scores for mood and anxiety with the data collected from wearable devices. In particular, we have found that the mean value of the length of deep sleep best predicted HAMD scores. Moreover, the standard deviation of the overall sleep score best predicted YMRS scores.

**Conclusions:** We could meaningfully predict changes in patients' clinical symptoms through a combination of self-reported data and objectively measured lifestyle data from the Fitbit smartwatch without any external medical judgment intervention. This study demonstrates the potential of wearable devices in predicting and managing the mental health status of adolescents with mood disorders.

Sleep was rated as the most important factor in the study, correlating with the most important objective measures of several mood disorders.



## P.07 THE PREVALENCE OF INSOMNIA IN DEPRESSED ADULTS: A SYSTEMATIC REVIEW

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**Background/Aims:** Insomnia and depression are closely linked, with insomnia often preceding or out-lasting depressive episodes, increasing the risk of developing a depressive disorder and of associated suicidal ideation and acts, and increasing rates of depressive relapse. The presence of insomnia in people with depression is also associated with higher overall morbidity and reduced quality of life. The treatment of insomnia in people with depression is associated with improvements in both sleep and depression, as well as improved overall patient outcomes. However, care for patients with comorbid insomnia and depression largely remains focused on depressive symptoms and access to gold standard evidence-based insomnia treatments remains limited.

Accurate estimates of prevalence rates of insomnia in depression are important for informing continued efforts to optimise and deliver effective clinical services for people with depression. To our knowledge, there has been no systematic review of studies evaluating the prevalence of insomnia in people with depression. We aimed, therefore, to estimate, in a systematic review of all relevant studies, the prevalence rate of insomnia in depressed adults.

**Methods:** We searched databases including Ovid Medline, Ovid Embase, Ovid PsycINFO, PubMed, and TRIP from inception to October 2024. We included studies of currently depressed adults which reported the prevalence of insomnia symptoms. Two independent reviewers

assessed articles and extracted data. Each included study was assessed by two independent reviewers for risk of bias.

**Results:** 5,021 unique references were identified, of which 82 full texts were reviewed after title and abstract screening. Fourteen studies, with a combined total of 10,337 participants and published between 2001 and 2024, met the inclusion criteria and were included in the analysis. Eight studies were from the US, and one each from China, Turkey, S. Korea, Belgium, and the Netherlands, while one included participants from both Malaysia and Australia. The mean prevalence rate of any insomnia symptoms in depressed adults was 78% (95% CI 70% to 85%), N = 10,337. The mean prevalence rate of moderate or severe insomnia in depressed adults was 62% (95% CI 52% to 72%, N = 2,990).

**Conclusions:** To our knowledge, this is the first systematic review of studies reporting on the prevalence of insomnia in depressed adults. The main finding is that approximately three-quarters of depressed adults will experience insomnia symptoms, with approximately two-thirds experiencing moderate or severe symptoms. Such high prevalence rates are consistent with previously reported figures that include adults with recent and historical depression diagnoses. This suggests that insomnia is both common and under-treated in depressed adults, which in turn increases the risk of relapse in depression. Given this, and that insomnia symptoms in adults with depression are infrequently treated directly despite evidenced-based, effective, acceptable treatments existing, clinical services should routinely offer targeted interventions in identifying and managing co-incident insomnia symptoms.

**Conflict of interest(s):** The authors work in a public health service that treats and contributes to research on, insomnia and depression.

## P.08 GLOBAL PLASMA PROTEOMICS IN ADOLESCENT DEPRESSION

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### Abstract

Depressive and anxiety disorders are the most common mental disorders often with an onset in adolescence. Regardless of the recent advancements in biological research in psychiatry, the aspect of early psychopathology remains underrepresented. Due to the high level of heterogeneity and co-morbidity observed in depressive disorders, the identification of phenotypes based on biological markers could enhance the prediction of disease trajectories. This approach would improve diagnostic accuracy and facilitate the selection of personalised treatments from the outset. We aim to identify plasma proteins and systemic physiological alterations associated with depression in adolescents.

Using plasma samples from adolescent outpatients participating in the SMART cohort (n=103) and healthy adolescents in the PANIC cohort (n=53), global proteomics data were generated by using liquid chromatography-tandem mass spectrometry. Linear and elastic net regression modelling were used to identify differences in plasma proteins, adjusted by age and sex, between depressed (MDD) and healthy (HC) adolescents. Additionally, functional enrichment and clustering analyses were performed to identify altered biological processes and potential sub-phenotypes, respectively. Global plasma

proteomics as a holistic approach shows potential in identifying protein signatures associated with adolescent-onset depression. This study provides insights into the complex biological networks underlying the physiology of mental health.

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## P.09 PROMOTING SELF-EFFICACY IN A BRIEF VIRTUAL REALITY-BASED EXPOSURE (VRE) FOR FEAR OF HEIGHTS

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**Background/Aims:** Exposure therapy is widely recognized as an effective treatment for phobic fear and anxiety disorders. However, some individuals achieve only partial symptom remission or do not fully benefit from exposure. Research from our laboratory indicates that incorporating self-efficacy enhancement (SEE) into exposure therapy, particularly after virtual reality exposure (VRE), is a promising approach to further reduce fear of heights and avoidance. The present study investigates whether administering SEE during versus after a brief VRE session is more effective in enhancing VRE outcomes for height-fearful individuals.

**Methods:** SEE was operationalized through performance feedback and retrieval of specific mastery experiences and was implemented either concurrently with the VRE session or immediately afterward.



Participants were randomly assigned to one of four groups:

- PF-ME: Performance feedback during VRE followed by mastery experience evaluation.
- PF-only: Performance feedback during the intervention but placebo evaluation afterward.
- ME-only: No feedback during the intervention but mastery experience evaluation afterward.
- VRE-only: No feedback during the intervention and placebo evaluation afterward.

Various outcome measures were used to assess treatment effects, including self-reported fear of heights and avoidance, behavioral avoidance, and psychophysiological responses. Assessments were conducted both 24 hours post-intervention and at three-month follow-up to evaluate immediate and long-term treatment effects.

**Results:** Preliminary findings show a general decrease in subjective anxiety and avoidance and an increase in behavioral approach across all groups from pre- to post-intervention. At three-month follow-up, PF-only and ME-only showed significantly less reduction in self-reported anxiety compared to PF-ME.

**Conclusions:** Our preliminary findings suggest that while all groups showed a reduction in anxiety and avoidance, the combination of performance feedback and mastery experience evaluation (PF-ME) may lead to more sustained anxiety reduction over time.

## P.10 THE EFFECT OF MINDFULNESS BASED GROUP THERAPY ON THE DEPRESSION, ANXIETY AND QUALITY OF LIFE IN KOREAN PATIENTS WITH BREAST CANCER

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**Background/Aims:** The purpose of this study was to investigate the effects of mindfulness based group therapy on the depression, anxiety and quality of life in Korean patients with breast cancer.

**Methods:** 24 patients were selected randomly among 60 patients with breast cancer, aged 35 to 65 who underwent surgery at least 1 year before, completed chemotherapy or radiotherapy and now attending self help group. They were randomly assigned to either an intervention group (90 minutes of Group therapy per week for 15 times) (n=12) and control group(no action)(n=12). Korean Personality Assessment Inventory(PAI) was used to assess the effect of therapy on depression and anxiety. Korean version of European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-C30(EORTC-QLQ-C30) Score was used to assess quality of life.

**Results:** There was no significant difference in the homogeneity of the two groups. Depression were significantly reduced in mindfulness based group therapy

compared to the control group( $F=42.73$ ,  $p<.001$ ). All subscales of depression in K-PAI also were reduced after mindfulness based group therapy.

Anxiety were significantly reduced in mindfulness based group therapy compared to the control group( $F=27.86$ ,  $p<.001$ ). All subscales of anxiety in K-PAI were also significantly reduced after mindfulness based group therapy. Global quality of life was significantly increased in mindfulness based group art therapy compared to the control group( $F=34.10$ ,  $p<.001$ ). In Functional quality of life, physical, cognitive, social function, role function and emotional function were significantly increased in mindfulness based group therapy compared to the control group.

In Symptomatic quality of life, fatigue, nausea and vomiting, pain, constipation, diarrhea and sleep disturbance were significantly improved in mindfulness meditation based group therapy compared to the control group. Dyspnea, appetite loss, financial problem were not significantly improved after mindfulness based group therapy.

**Conclusions:** Mindfulness based group therapy is effective to reduce depression and anxiety and improve quality of life in Korean patient with breast cancer. Mindfulness based group therapy could be a useful psychosocial care program for Korean patient with breast cancer.

## P.11 ELECTROPHYSIOLOGICAL CHANGES IN DEPRESSIVE PATIENTS WITH NON-SUICIDAL SELF-INJURY: AN EVENT-RELATED POTENTIAL STUDY AND SOURCE ANALYSIS

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**Background/Aims:** This study aimed to investigate the relationship between psychological characteristics, neural activity, and cognitive control in adolescents with NSSI compared to healthy controls (HC).

**Methods:** A total of 51 adolescents with NSSI and 50 HC were recruited. Psychological characteristics were assessed using standardized scales, including the Interpersonal Needs Questionnaire (INQ) and Short UPPS-P Impulsivity Scale (SUPPS-P). EEG was recorded during a go/no-go task to measure P3 amplitudes. Source analysis was performed to localize neural activity. Group differences were analyzed using ANCOVA to control depression and anxiety, followed by partial correlation and mediation analyses to evaluate relationships among variables.

**Results:** The NSSI group exhibited significantly lower no-go P3 amplitudes at all electrodes compared to the HC group ( $p < 0.001$ ), even after controlling for depression and anxiety. No-go P3 amplitudes were negatively correlated with INQ scores, suggesting that interpersonal distress impacts response inhibition. Source analysis revealed reduced neural activity in the right superior frontal gyrus, inferior parietal gyrus, and other regions associated with cognitive control and emotional regulation in the NSSI

group. However, these differences disappeared after adjusting for depression and anxiety, indicating their potential mediating role.

**Conclusions:** These findings highlight the interplay between interpersonal distress, depression, anxiety, and cognitive control deficits in adolescents with NSSI. Future longitudinal studies are needed to confirm these pathways and explore therapeutic interventions targeting interpersonal distress and emotional regulation to mitigate NSSI behaviors.