

Background

- Psilocybin-assisted interventions have shown rapid improvements in depression, anxiety, and psychological well-being. [1]
- However, treatment response varies across individuals, highlighting the need to identify predictors of therapeutic outcomes. [2, 3]
- Psychedelic therapy models emphasize “set and setting”, where psychological readiness and the acute psychedelic experience influence outcomes. [3, 4]
- Pre-session preparedness and in-session emotional breakthrough are proposed mechanisms linked to therapeutic change. [5, 6]
- Despite growing interest in these mechanisms, little research has examined them within real-world regulated psilocybin services.

Study objective

Examine whether pre-session preparedness and in-session emotional breakthrough moderate changes in depression, anxiety, and well-being following psilocybin services within Oregon’s regulated services model.

Methods

Design & Sample:

Prospective naturalistic study of 88 adults (mean age 47 years; 47% female; 47% using psychiatric medications) completing psilocybin sessions at a licensed Oregon service center. [7]

Session:

- Facilitator-supervised
- Typical doses 20-30 mg psilocybin equivalent (mean 27 mg)

Outcome Measures:

- PHQ-8 (Depression); GAD-7 (Anxiety); WHO-5 (Well-being) measured pre-session and 30 days post

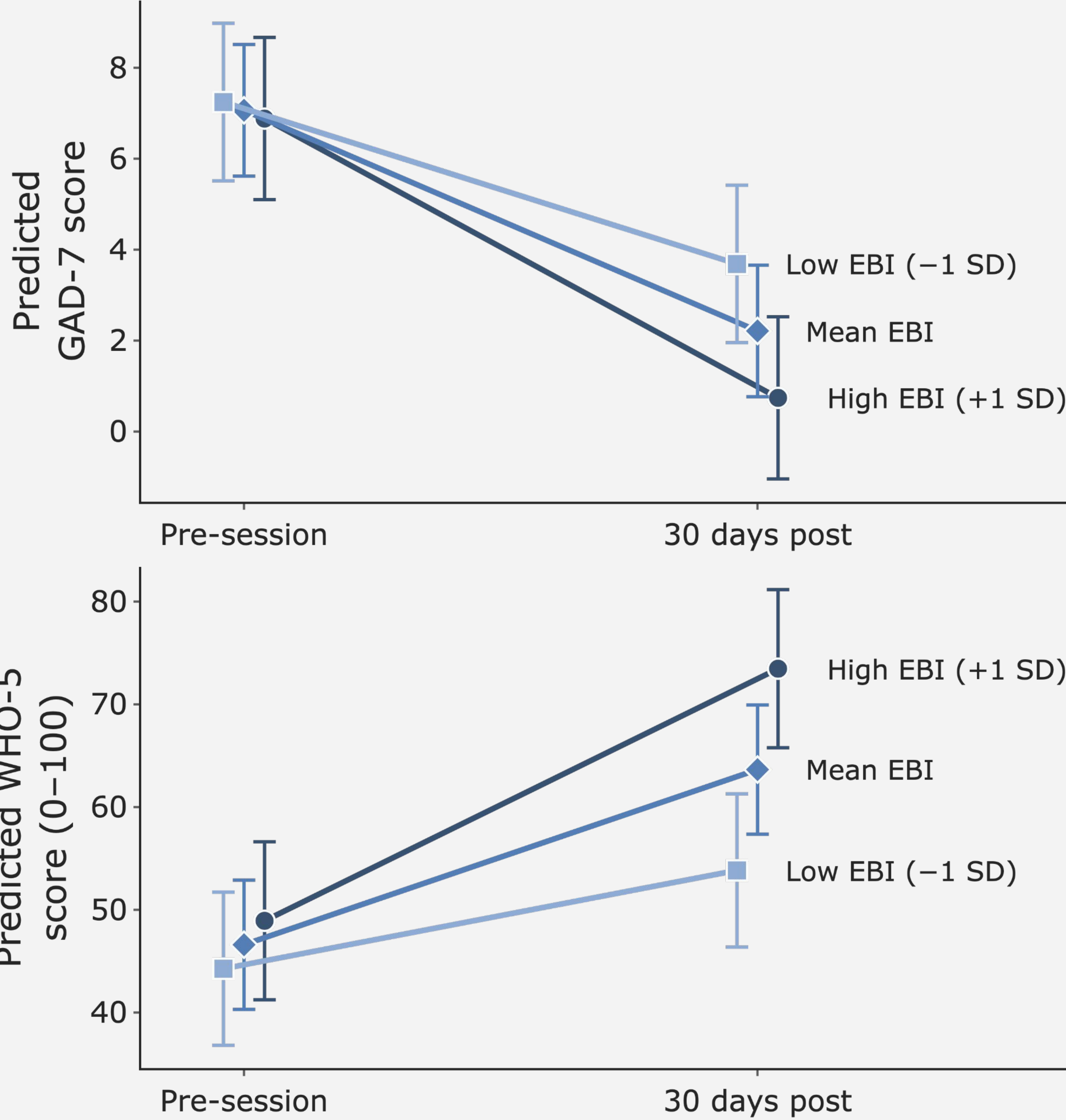
Psychological Predictors:

- Imperial Psychedelic Predictor Scale (iPPS) - Pre-session Preparedness (0-100 point scale) [8]
- Emotional Breakthrough Inventory (EBI) - In-session Experience (0-100 point scale) [6]

Analyses:

- Linear mixed-effects models estimated change from pre-session baseline to 30-day follow-up (6 models)
- Tested Time x Predictor interactions (iPPS and EBI) to assess moderation of symptom change
- Models adjusted for age, sex, psychiatric medication use, and psilocybin dose, with random intercepts for participants

Results



Predicted change in anxiety (top) and well-being (bottom) by EBI, adjusted for age, sex, psychiatric medication use, and psilocybin dose. Lines show mixed-model predicted scores at three levels of EBI: low (1 SD below the mean, EBI ≈ 47), mean (≈ 73) and high (1 SD above, ≈ 99), with 95% CIs.

Preparedness and Breakthrough

Pre-session preparedness (iPPS) was not significantly associated with emotional breakthrough ($r=0.17$, $p=0.11$).

Mixed-Effects Moderation models

EBI as a Moderator

- Emotional breakthrough moderated anxiety outcomes: greater EBI was associated with larger reductions in GAD-7 scores (Time x EBI: $B = -0.049$, $p = 0.022$).
- Emotional breakthrough also moderated well-being: higher breakthrough was associated with greater increases in WHO-5 scores (Time x EBI: $B = 0.28$, $p < 0.001$).

iPPS as a Moderator

- Higher preparedness was associated with larger increases in WHO-5 scores (Time x iPPS: $B = 0.56$ per iPPS point on the 0–100 scale, $p = 0.019$).
- Preparedness did not significantly moderate changes in depression (PHQ-8, $p = 0.67$) or anxiety (GAD-7, $p = 0.75$).

Discussion

- The psychological experience during the session was more consistently associated with outcomes than was readiness.
- Emotional breakthrough may reflect key therapeutic processes facilitated by psilocybin, such as confronting avoided emotions, emotional release, and new perspectives on difficult experiences. [5, 6]
- Emotional breakthrough moderated improvements in anxiety and well-being but not depression.
- This may reflect the stronger relationship between anxiety symptoms and emotional avoidance processes, which are directly engaged during emotionally intense psychedelic experiences.

Main Finding

Greater emotional breakthrough during the psilocybin session predicted larger improvements in anxiety and well-being. Pre-session preparedness predicted larger improvements in well-being only.

Limitations

Preparedness scores showed limited dynamic range, likely due to ceiling effects and post preparation administration inflating/homogenizing scores, which may have attenuated associations of iPPS with depression and anxiety.

Observational naturalistic design without a control group limits causal interpretation of the associations between psychological processes and outcomes.

References

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Disclosures: Dougherty, Shih, and Qian are employees of Osmind.

