The cognitive effects of 5-Methoxy-*N,N*-Dimethyltrytamine (5-MeO-DMT) are associated with improvements in depression and anxiety conditions

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Introduction

5-methoxy-*N,N*-dimethyltryptamine (5-MeO-DMT), is a short-acting (30-90 minutes) tryptamine found in the venom and skin of *Bufo alvarius* toads and can also be synthetically produced (1, 2, 3). According to a recent epidemiological survey study, 5-MeO-DMT is used infrequently, primarily for spiritual exploration, has a safe profile of use and low potential for psychiatric or biomedical consequences, and might have psychotherapeutic effects (4). More specifically, there have been reports of spontaneous and unintended symptom improvements in anxiety and depression (4).

Study Aim

The primary aim of this current analysis is to examine whether use of 5-MeO-DMT is associated with spontaneous and unintended improvements in depression and anxiety among people who have used 5-MeO-DMT in the US with procedures that guide the source, dose, and administration of 5-MeO-DMT, and the preparation of and support during/following sessions. The second aim of this study is to examine factors associated with improvement in depression and anxiety.

Method & Data Analysis

Using an email distribution list of people in the US that use 5-MeO-DMT in a specific group setting, we recruited English-speaking adults to complete an anonymous web-based survey. The primary survey used for this study included an extensive series of questions about the patterns of use, acute subjective effects, and potential consequences and benefits of using 5-MeO-DMT in this group setting. Depression and Anxiety measures, the Mystical Experiences Questionnaire, the Challenging Experiences Questionnaire, and Persisting Effects Questionnaire was included.

Sample Characteristics

Sample

362 respondents completed the survey

The sample was comprised as follows:

- Mean age = 48 (*SD*=13)
- White/Caucasian = 84%
- Heterosexual = 79%
- College Graduates = 75%
- Females = 45%

Sample after 5-MeO-DMT use

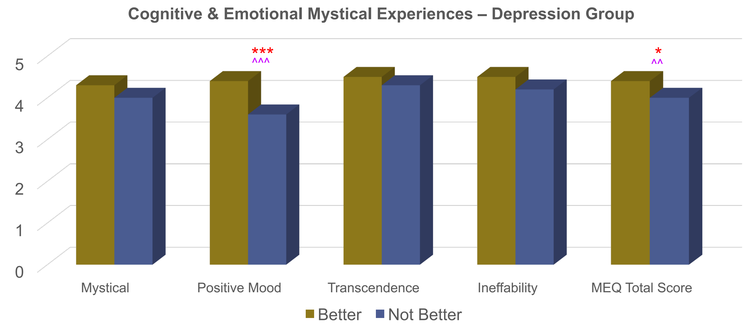
Rates of Anxiety (n=173)

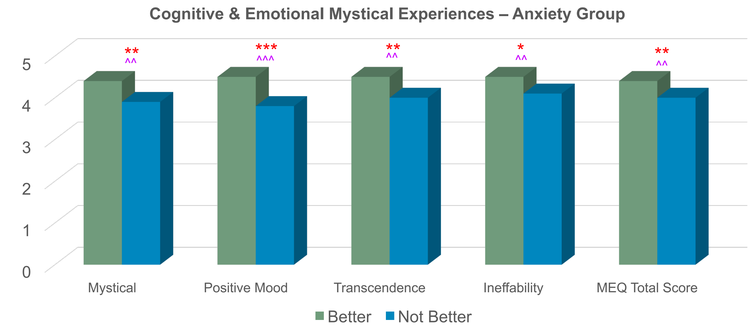
- Improved: 79%
- Stayed the same/worsened: 21%

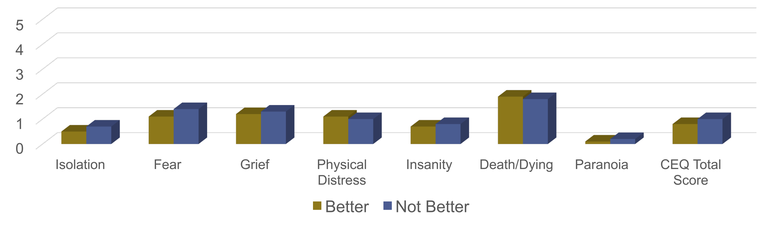
Rates of Depression (n=149)

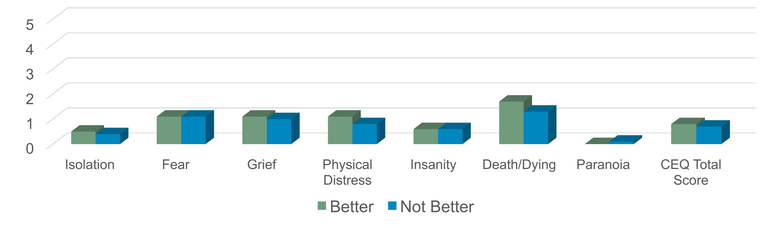
- Improved: 81%
- Stayed the same/worsened: 19%

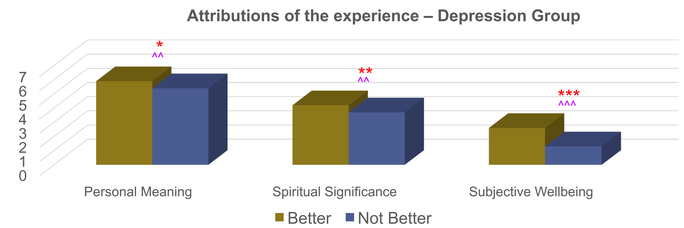
Results

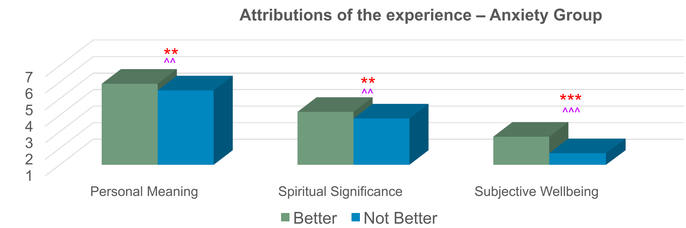












* p<.05; ** p<.01; *** p<.001 ^ Small effect; ^^ Medium effect; ^^^ Large effect

Conclusions

When administered in a naturalistic group setting, 5-MeO-DMT appears to be associated with spontaneous and unintended improvements in self-reported depression and anxiety (approximately 80%), which were related to more intense acute mystical effects and increases in ratings of the personal meaning and spiritual significance of the 5-MeO-DMT session, as well as higher ratings of the degree to which the session contributed to improved well-being and life satisfaction. These results are consistent with laboratory studies that found positive psychotherapeutic effects of tryptamines as an adjunct to supportive psychotherapy (5-8) and suggests the importance of the acute mystical effects of psychedelic substances as one of the mechanisms by which they exert psychotherapeutic effects (8-11).

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