



# Long-term Benefits to Psychological Health and Well-being After Ceremonial Use of Ayahuasca in Middle Eastern and North African (MENA) Immigrants and Refugees

## Study Design

The study consisted of six sequential web-based surveys over a period of 4 months assessing variables such as demographics, lifestyle, mindset, and personality traits, as well as characteristics of the experience itself such as dosage, ingestion method, intention, and setting, that could influence long-term effects and outcomes.

Participants completed surveys both before and after the ayahuasca ceremony.

The study was approved by an Institutional Review Board at the Western Institutional Review Board Copernicus Group (WCG IRB).



## Substance



Ayahuasca was administered in the form of a brew containing leaves of the Psychotria Viridis and the ayahuasca vine, Banisteriopsis Caapi.

## Participants

- Fifteen participants.
- Average age was 30.1 years.
- 73.3% of participants were female.
- Most participants identified as an immigrant or refugee (66.7%) or nonimmigrant with foreign-born parents (20%).
- 80% identified as Arab, Middle Eastern, or North African.
- 80% of participants had no experience of using ayahuasca prior to enrolling in the study
- 80 had been previously diagnosed or struggled with a mental health condition (anxiety disorder = 66.7%; mood disorder = 53.3%; eating disorder = 26.7%; personality disorder = 6.7%; substance related disorder = 6.7%).

## Setting & Guide

- Participants attended an ayahuasca ceremony as part of a five-day retreat.
- The ceremony took place over five days, and involved two consecutive days of ayahuasca use, followed by integration.
- In addition to the ceremonial guide, three male helpers, three female helpers, a female licensed therapist, and a translator attended the ceremony.
- The ceremony guide reported receiving over a decade of training from a shaman in the Amazonian regions of Peru, and several years independently leading ayahuasca ceremonies.
- Live instrumentals, live vocals, and shamanic or ritualistic music were performed by the ceremony guide.
- 86.7% reported that both the guide and ceremony had a significant positive impact on their experience.

## Diet

- Participants were provided with detailed instructions on clothing and materials allowed at the ceremony, and dietary and spiritual suggestions included a regimented diet beginning up to 14 days before the ceremony with a list of supplements and prescription medicines that can have contraindications with ayahuasca
- All participants reported no alcohol consumption or use of caffeine, cannabis, selective serotonin reuptake inhibitors (SSRIs), benzodiazepine, prescription or other stimulants, nootropic, opioid, or other psychedelics.

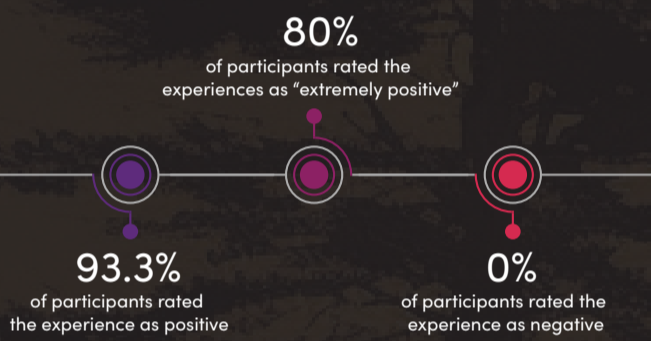
## Intention

- Participants characterized the purpose for the ayahuasca ceremony as self-exploration (86.7%), creativity (60.0%), mental health (53.3%), physical health (33.3%), therapy (26.7%), productivity (26.7%), and recreation (13.3%).
- All respondents (100.0%) reported setting a specific intention for the experience.
- For example, "I want to heal from the abuse I endured to be able to be the best version of myself," or, "I want to get back in touch with my true self. I want to be brave to become my authentic self publicly."



## Overview of Findings

### Ratings



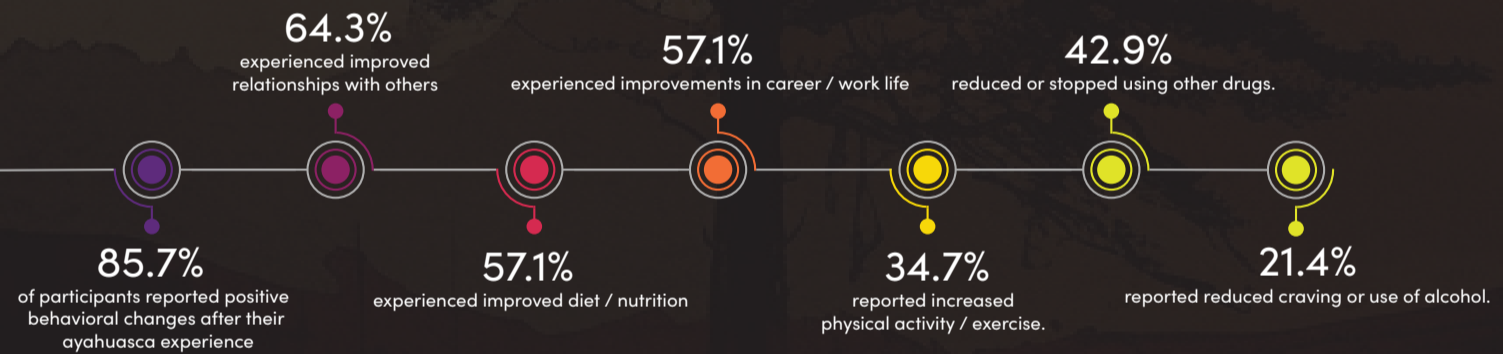
### 2-4 Weeks After

- 92.9% of participants considered the ceremony among the top 10 most personally meaningful experiences of their life
- 85.7% considered the ceremony among the top 10 most psychologically insightful and spiritually meaningful experiences of their life
- 100% of participants believed the ayahuasca experience and their contemplation of that experience led to long-term and persisting changes in their current sense of personal well being or life satisfaction, all participants considered the change as positive and desirable

### 3-4 Months After

- 100% all respondents characterized their experience using ayahuasca as beneficial
- 93.3% of participants believed the ayahuasca experience and their contemplation of that experience led to long-term and persisting changes in their current sense of personal well being or life satisfaction, all participants considered the change as positive and desirable

## Behavioral Improvements



## Risks

42.9% considered the ceremony among the top 10 most psychologically challenging experiences of their life.

Participants reported several symptoms during and after the ayahuasca ceremony. While most symptoms did not persist in the 24 hours following the ceremony, respondents reported some persisting symptoms

60.0% of participants reported no persisting negative effects at each longitudinal follow up..

### Symptoms During

- 40.0% Lack of Appetite
- 26.7% Fatigue
- 13.3% Physical pain

### Care Sought

- 40.0% reported seeking psychological care (e.g., "I talked some of the helpers and participants and that helped me to integrate and feel less anxious or angry.")
- 0.0% Reported seeking medical care during the experience.

### 3-4 Months After

- 20.0% Loneliness
- 13.3% Depressive Notions
- 13.3% Lowered Motivations
- 6.7% Mood Fluctuations

## Mood

Using the State Trait Anxiety Index (STAI), prior to the ceremony, 69.2% of participants met criteria for high-risk state anxiety, and 76.9% met criteria for high-risk trait anxiety. 2-4 weeks after ayahuasca ingestion, only 22.2% of participants met criteria for high-risk state or trait anxiety. Our results show ceremonial ayahuasca us significantly decreased anxiety scores 2-4 weeks following ingestion.

## Anxiety

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Our findings show that ayahuasca use administered in a ceremonial setting in a monitored setting may represent a promising treatment strategy to address mental health and wellbeing challenges experienced by immigrants and refugees of MENA descent.

## Emotion Regulation

Emotion regulation strategy plays a significant part in the experience and expression of emotions and their effect on physical and mental health (Gross & Thompson, 2007; Koole, 2009; Kring & Sloan, 2009).

Cognitive reappraisal, which denotes the ability to change one's thoughts about emotionally charged stimuli, showed significant increases after ayahuasca ingestion.

## Shame & Self-Compassion

Increased self-compassion is associated with lower levels of mental health symptoms (MacBeth and Gumley, 2012), emphasizing the importance of self-compassion for developing well-being, reducing depression and anxiety, and increasing resilience to stress (Feldman and Kuyken, 2011; Gilbert, 2010; Hofmann et al., 2011). Higher levels of shame are also associated with lower satisfaction with mental health and characterized by more negative attitudes towards seeking professional help (Rüsch et al., 2013). In the present study, significant reductions in shame and increases in self-compassion suggest potential mechanisms for the improvement of mental health and wellbeing after the ingestion of psychedelic substances.

## Psychedelic Predictor Scale

Acute experiences of mysticism, emotional breakthrough, psychological insight, and awe were significantly associated with pre-ceremony recordings of the Psychedelic Predictor Scale (PPS), which captures thoughts and expectations right before a psychedelic experience and the willingness to surrender to the experience across two subscales of set and setting (Haijen et al., 2018). While a relatedly, these results suggest the PPS may be a useful tool to measure psychedelic preparedness.

