Psychedelic Medicine: Creating an Introductory Course for Mental Health Professionals and Trainees

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The term psychedelics, defined broadly, refers to psychoactive compounds that produce characteristic alterations in cognition, perception, and emotion [1]. While there is some debate over which substances qualify as “psychedelics,” the term commonly includes serotonergic hallucinogens (psilocybin, LSD, DMT, mescaline), dissociative anesthetics (ketamine), empathogen/entactogen stimulants (MDMA), and atypical hallucinogens (Ibogaine, Salvinorin A) [2]. Today, the scientific and medical study of these substances is expanding rapidly as increasing numbers of pre-clinical and clinical studies demonstrate that psychedelic therapies hold promise across a range of mental health and neuropsychiatric conditions [2–6]. In particular, psilocybin- and MDMA-assisted therapies have been granted breakthrough therapy status by the Food and Drug Administration (FDA) for major depressive disorder and post-traumatic stress disorder, respectively. If these treatments are eventually approved by the FDA, there will be a large need for therapists and psychiatrists working in this area. Accordingly, increasing numbers of researchers, clinicians, and mental health professional trainees are becoming interested in the field and seeking related training and education.

Creating thoughtful, nuanced, and critical educational initiatives on psychedelic medicine is challenging given the controversial history that surrounds these substances, as well as the multiplicity of discourses through which the uses of psychedelics can be understood. For instance, psychedelics can be considered through neurobiological, pharmacological, psychological, interpersonal, spiritual, and anthropological lenses, among others. With the recent resurgence of this field and an increasing likelihood that some of these treatments will be approved for medical use, critical, multidisciplinary explorations of its scientific, social, and historical underpinnings will be vital to informing both the medical community and the public at large. Researchers and clinicians alike should have a well-rounded understanding of these substances, including the challenges in studying them and using them in clinical practice, if they hope to maximize benefits to patients [7].

To meet the growing need to educate mental health providers, trainees, and researchers about psychedelic science and medicine, a range of private organizations are offering psychedelic education and training programs but at substantial cost to trainees. While a growing number of psychedelic research and education groups are being established at academic institutions around the country, most medical school and psychiatry residency teaching curricula do not formally include education or training on this rapidly evolving topic. To help fill this void and make a rigorous introductory educational offering available to trainees, we created a psychedelic medicine seminar, which was first offered in the fall of 2020 as an elective in the Yale Department of Psychiatry. It has since been used at several other academic institutions as a course template. In this paper, we will discuss the course organization, delivery, and feedback.

Course Organization

Our goal was to create a course that would introduce mental health professional trainees to a variety of core topics within the field of psychedelic medicine. In addition to covering topics such as psychedelic pharmacology, neurobiology, and clinical applications, we also included explorations of indigenous uses of psychedelic plants, ethical challenges, and treatment models. We titled the course Psychedelic Medicine: Past, Present, and Future and used a temporal organization to contextualize the current wave of psychedelic research within its historical context. A complete list of core topics can be found below (Table 1).
Of note, this course was designed to complement an ongoing seminar series offered by the Yale Psychedelic Science Group (YPSG), which spotlights subject matter experts who are invited each month to present on their area of expertise (see www.yalepsg.org). While highly engaging and informative across a range of topics, this format lacks internal consistency and attracts different audiences to each session. Our aim was to fill a different need, and to provide an introductory course with an organized trajectory that would inspire both self-directed and peer-to-peer learning among a group of consistent participants. To accomplish this, we deemphasized didactic lectures and followed a graduate school reading seminar format. Specifically, we chose a selection of papers that introduced various important aspects of the field and asked students to read 2–3 papers before each of 8 weekly sessions and come to class prepared to discuss. Each 90-minute class began with a 15-minute mini-lecture given by one of the two course facilitators. This was followed by a short mindful listening exercise. The remaining 70 minutes was reserved for discussion.

The course was listed in the Yale Department of Psychiatry elective course catalogue and also advertised through the YPSG email list. The interest level was much higher than anticipated. We initially planned to enroll 12 participants, but within a few weeks, over 70 people requested to join. To maintain the discussion-based nature of the course, we were unable to enroll everyone. However, we did expand the course significantly to accommodate 35 participants. The class consisted mainly of medical students, psychiatry residents, and mental health clinicians, but also included university faculty members and others from fields outside of healthcare, including religious studies and law.

### Course Delivery

In creating and delivering the course, we sought to incorporate principles of adult learning. We used the strategies below to promote active engagement with both the material and other learners.  

### Pre-reading and Media

The bulk of the course material was contained in a selection of academic papers and book chapters that presented scientifically rigorous and peer-reviewed information from a diversity of sources (full syllabus can be found online at [8]). To not overwhelm participants, we designated only 2–3 readings per week as “required” and provided additional “suggested readings” for those interested in learning more. We also incorporated popular media, which provided engaging visual, audio, and narrative materials depicting different perspectives on the field. For example, mainstream news clips provided a view of what the lay public is presented about psychedelics. In contrast, the fictional story We Will Call it PALA was used to imagine the promise and perils of the future expansion of psychedelic therapy [9]. All of the course content was housed on a website we created.

### Video Conference

Given the limitations imposed by the COVID-19 pandemic, we held the course over Zoom video conference. This platform was largely effective for our purpose, as it allowed us to present and interact with the entire class or divide into randomly assigned small groups for discussion. Granted, important aspects of connecting with one another were lost by not meeting in-person, including the often-fruitful spontaneous conversations which occur before and after class. However, hosting sessions virtually enabled participants from across the country to join which enhanced the diversity of perspectives.

### Lecture

In this course, we sought to limit the time dedicated to lecture. However, we also saw value in the course facilitators providing context, perspective, and a narrative thread between sessions. To balance these two goals, we began each session with a brief 15-minute introductory lecture from one of the two course facilitators.

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### Table 1  Summary of topics covered each week during the Psychedelic Medicine course (full course syllabus available at [8])

| Past | Present | Future |
|------|---------|--------|
| Week 1: Indigenous uses of psychedelic plants | Week 3: Behavioral and clinical neurobiology | Week 7: Diversity, equity, and inclusion in psychedelic medicine |
| Week 2: Early Western research and experimentation | Week 4: Healing and mystical-type experiences | Week 8: Models of psychedelic science and treatment |
| Week 5: Drug-assisted psychotherapy | Week 6: Frontiers and controversial topics in psychedelic research | |

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[8]: www.yalepsg.org

[9]: We Will Call it PALA
Mindful Listening

Music is widely considered to be a central component of “setting” in psychedelic therapy and has even been called “the hidden therapist” in this context [10]. To explore this aspect of the field experientially, we paused for 2–5 minutes after each introductory lecture for a mindful listening exercise. During this time, we listened to music selections relevant to psychedelic medicine and culture, including an Amazonian Icaro (a medicine song sung by healers/shamans in ayahuasca ceremonies), psychedelic rock songs, and various pieces used in psychedelic dosing sessions at both Johns Hopkins and Yale.

Discussion

Every session centered around discussions, which took place in both small and large groups. Small group discussions allowed learners to share their perspective and interact with different participants each class, while large group discussions permitted ideas to be shared across the entire class. After the mindful listening exercise, we divided the class randomly into small groups of 6–8 participants who met in separate breakout rooms. To help direct the discussion towards the most salient issues, the course facilitators provided a short list of questions to consider based on that week’s readings. After about 20 minutes, all learners returned to the large group and a speaker from each small group briefly presented their group’s main takeaways. We then transitioned into a discussion with the entire class that ran for the remainder of the session. The course facilitators attempted to focus the discussion without hindering the natural flow of ideas that arose spontaneously.

Course Feedback

We used a post-course survey to capture both quantitative and qualitative information from participants regarding their experience in the class. Of the original 35 participants, about 25 attended regularly, and 17 responded to the survey. Their feedback was overwhelmingly positive and indicated that we largely achieved our stated learning objectives (see 5-point Likert scale results below ranging from “Strongly Agree” to “Strongly Disagree”). The vast majority of learners reported an improved ability to synthesize scholarship relevant to psychedelic medicine across the biological, psychological, and social sciences (59% Strongly Agree, 35% Agree, 6% Neutral). They also reported an improved understanding of the historical context for current psychedelic research (82% Strongly Agree, 6% Agree, 6% Neutral, 6% Disagree); the neurobiological, psychological, and spiritual mechanisms by which psychedelics may function as therapeutics for mental health disorders (76% Strongly Agree, 18% Agree, 6% Neutral); and the political, commercial, and ethical issues facing the field of psychedelic medicine (70% Strongly agree, 24% Agree, 6% Neutral).

Participants also provided valuable narrative feedback about which parts of the course were most helpful and which aspects could be improved. Overall, the learners seemed to find the readings and group discussions most useful.

The small and large group discussions were very valuable for me. As someone who has researched this material in relative isolation, it was very rewarding and eye-opening to be in a group where so many people shared their ideas.

I found the readings to be very well-curated and have saved them all and even shared some of them with interested family/friends. I thought the introductions at the beginning of each class to be a nice orientation to the topics and always appreciated the music practice. And the small group discussions were usually the best part—the most synthesis/idea sharing happened in this space.

Learners also shared various ways they felt this course would affect their future practice.

Whether or not I end up working with psychedelic medicines, this course really drove home the importance of understanding the history and context of the treatments we provide, and especially the need to recognize structures of power that can be hidden behind the shiny face of a new and exciting treatment.

This course definitely had a huge influence on me and my view toward psychedelic medicine. As a psychiatrist to be, I am now more open to not only use it in my practice but also to be a part of this journey.

Challenges and Recommendations

A major challenge of creating an 8-session introductory course on a multifaceted field such as psychedelic medicine was selecting readings that (1) provided a succinct, high-quality overview of each core topic and (2) presented interesting ideas for class discussion. For some topics, it was especially difficult to find readings that provided a wealth of factual information and contained ideas to spur dialogue. For example, in-depth explorations of neurobiological mechanisms, while highly valuable, are more factual in nature and can be difficult for non-specialists to discuss in detail. In contrast, articles that proposed mechanisms more theoretically were easier to debate, but lacked important information about
the basic science. We chose articles of both types to balance this trade-off.

A tension between breadth and depth also emerged during class discussions. Each session included multiple important topics, and we often had to choose between allowing discussions to flow organically and curtailing fruitful conversations to ensure all topics were covered. Additionally, it was difficult to strike a balance between didactic teaching and discussion. Too much instruction can stifle active engagement among participants, while abundant conversation can give the sense that the course is “a bunch of people sharing what they think” (as one faculty participant critiqued). Having course directors manage and direct the conversation more could effectively improve this balance.

For groups interested in creating a similar course, we welcome them to use our syllabus as a starting point. We recommend seeking the support of their local institution or department (to provide funding if possible and aid with recruitment) and a senior advisor knowledgeable about the field (to aid with curating course content and lectures). Additionally, we found it highly valuable having a diversity of participant backgrounds and perspectives represented during discussion.

Conclusions and Future Directions

Psychedelic science and medicine are important emerging areas in psychiatry, neuroscience, and mental health treatment. Clinical studies to date show significant potential for psychedelic-assisted psychotherapy to treat a range of neuropsychiatric conditions. Accordingly, a large and growing interest has developed among mental health professionals and trainees who desire education and training in this area. Yet, few low-cost, high-quality educational opportunities are available. Just as the YPSG helped provide a blueprint for psychedelic medicine interest groups, here we offer a template for a course that can be used as an interdisciplinary introduction to the field of psychedelic medicine at other institutions. Given the high demand and overwhelmingly positive response, we plan to continue offering and developing this course. In the future, we envision it expanding and/or dividing to more thoroughly cover diverse topics including clinical, neuroscientific, anthropological, legal, and ethical perspectives. We believe that accessible, high-quality, multidisciplinary education on psychedelic medicine is imperative to equipping the next generation of mental health researchers and practitioners with the knowledge needed to best serve patients in need of these novel therapies.

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Declarations

Ethics Approval There was no institutional review board evaluation or approval required for this educational course.

Disclosures William Prueitt has no conflict of interest to report. Jordan Sloshower has received consulting fees from Usona Institute and Freedom to Operate.

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