



UW PACC

Psychiatry and Addictions Case Conference

UW Medicine | Psychiatry and Behavioral Sciences

PSYCHEDELICS FOR ADDICTION: A PRIMER FOR PROVIDERS

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DIRECTOR, CENTER FOR NOVEL THERAPEUTICS IN ADDICTION PSYCHIATRY

UW PACC

DECEMBER 1ST, 2022



SPEAKER DISCLOSURES

- ✓ Dr. Sackett acts as a Consultant to Resa-Health; ketamine-assisted Psychotherapy Clinic

OBJECTIVES

1. Place current research into larger historical context;
2. Understand basic differences in psychedelics;
3. Be able to explain to patients where we are at.

OUTLINE

- **Background**
 - Definitions
 - History
 - Addiction
- **Primer on Psychedelics**
 - LSD
 - Psilocybin
 - Ketamine
- **Where are we at now?**
 - MOA
 - Safety
 - What to tell patients?

Outline

I. Background

a. Definitions

b. History

c. Addiction

II. Primer on Psychedelics

III. Where are we at now?

Receptor

- 5-HT_{2a}: LSD, Psilocybin, DMT
- Mixed: MDMA, MDA, Iboga
- NMDA: Ketamine, DXM, NO

Structure

- Indolamines
 - Tryptamines: Psilocybin, DMT
 - Ergolines: LSD, LSA
- Phenethylamines: Mescaline, MDMA

Descriptive

- Classic Psychedelics: LSD, Psilocybin
- Empathogens: MDMA
- Dissociative: Ketamine

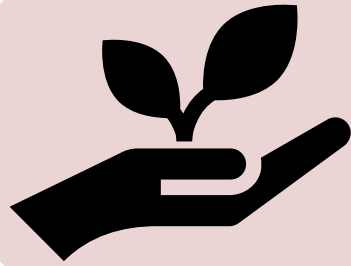
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- a. Definitions
- b. History**
- c. Addiction

II. Primer on Psychedelics

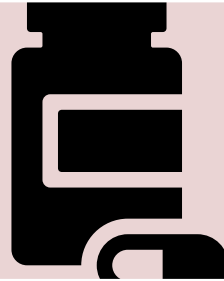
III. Where are we at now?



Wave 1

Discovery

1897 - 1943



Wave 2

Experimentation

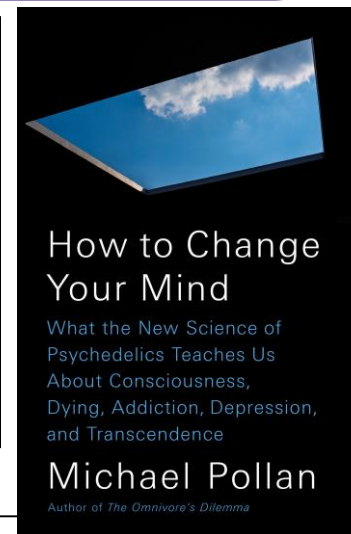
1943 - 1970



Wave 3

Neuroscience

1985 - Current



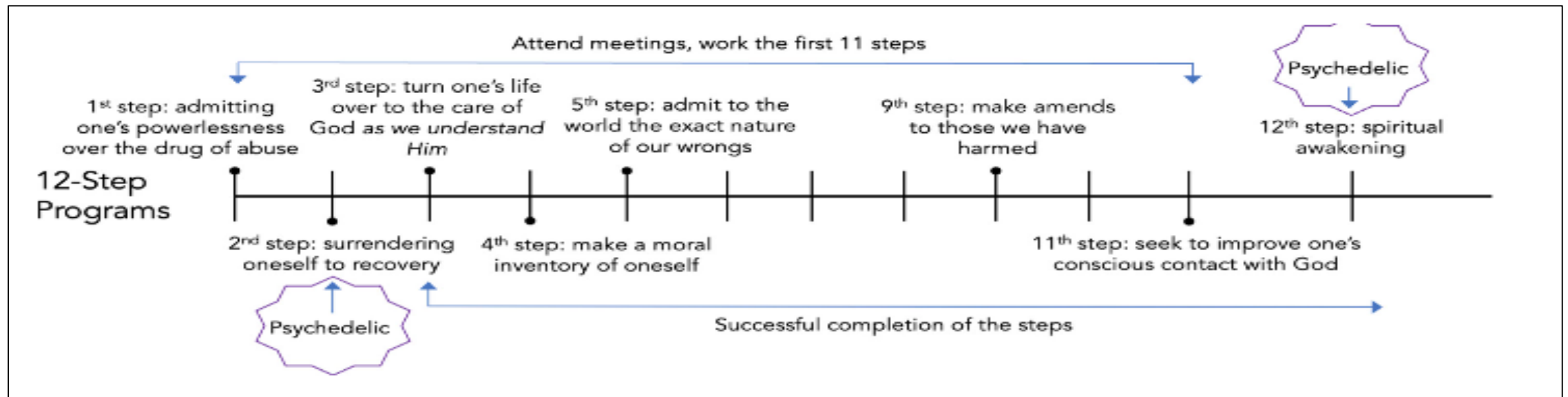
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- a. Definitions
- b. History
- c. **Addiction**

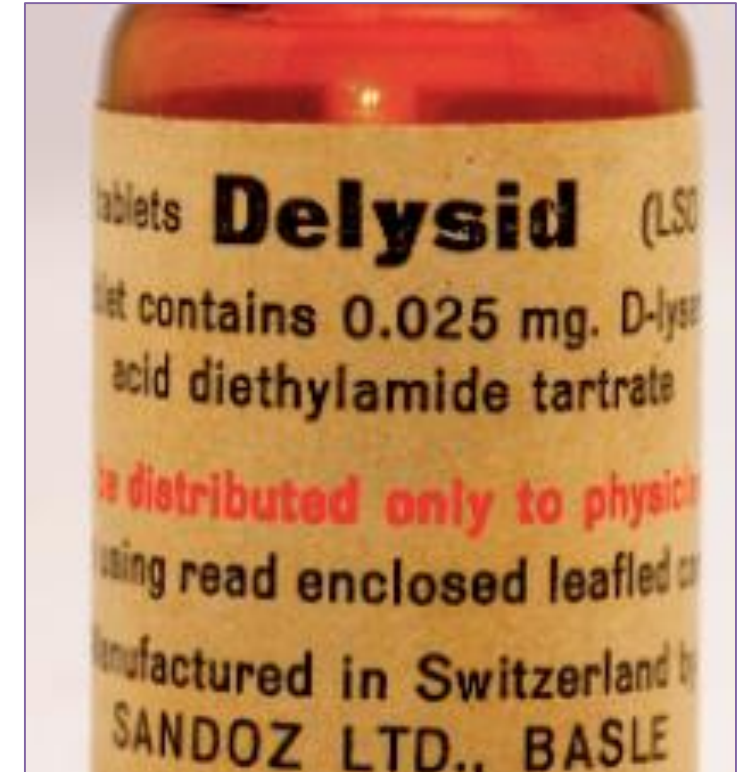
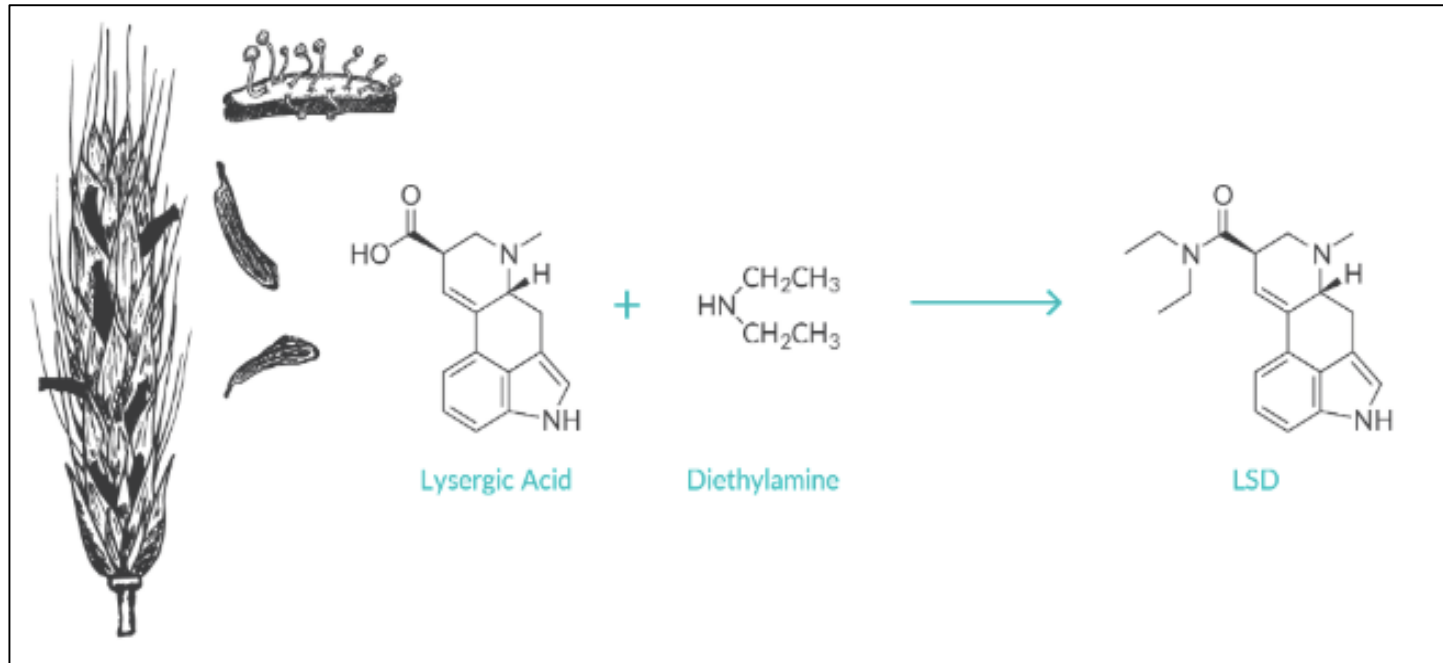
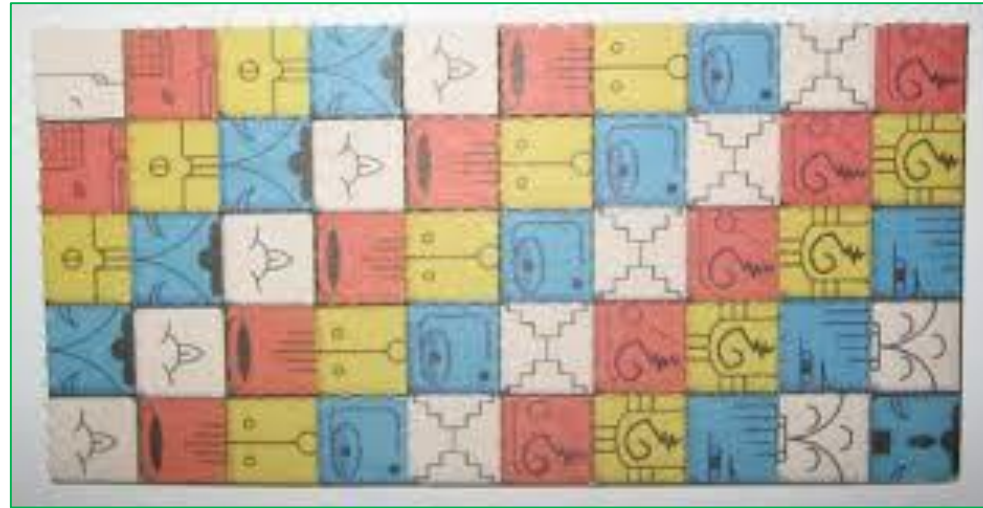
II. Primer on Psychedelics

III. Where are we at now?



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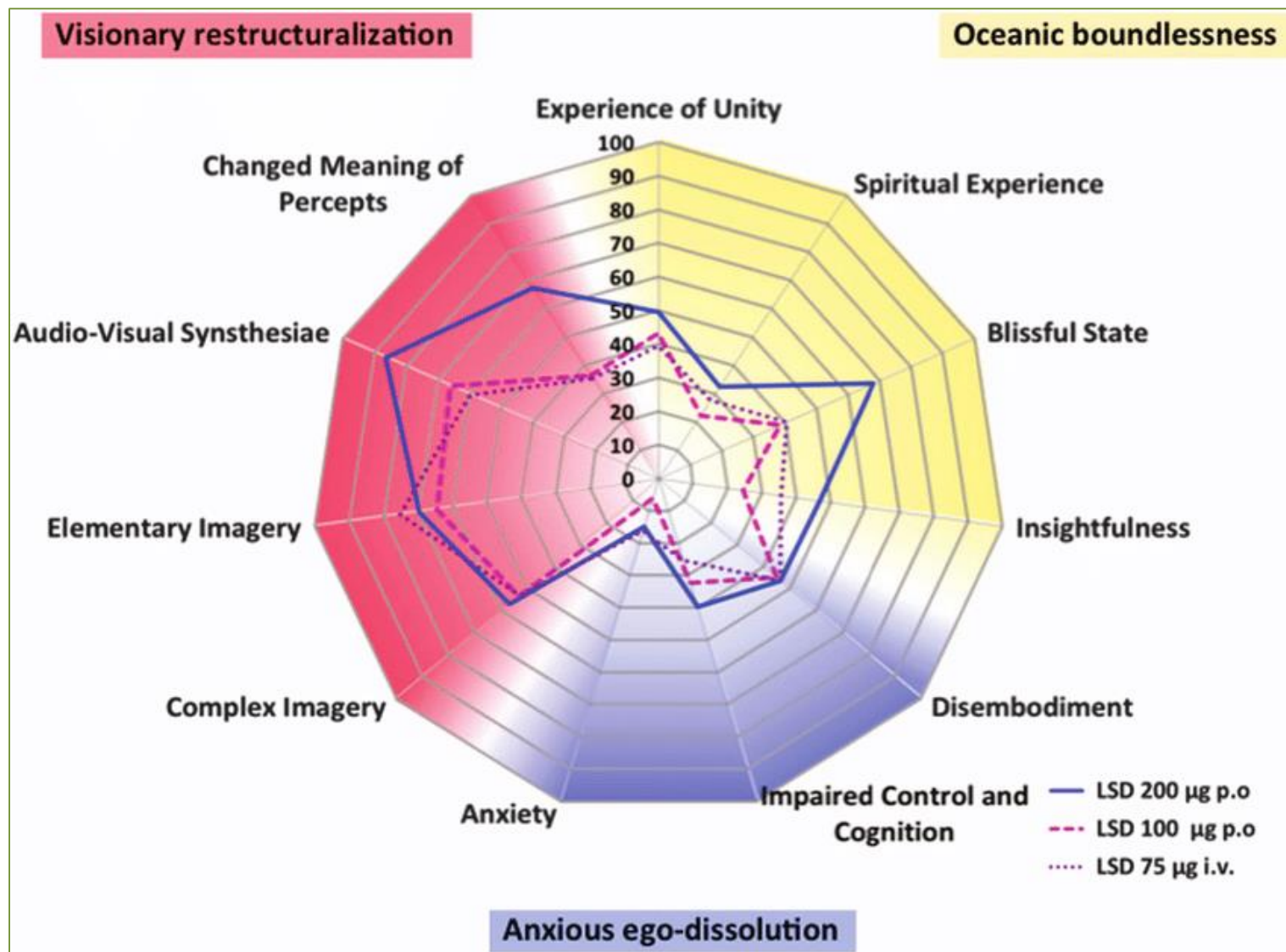


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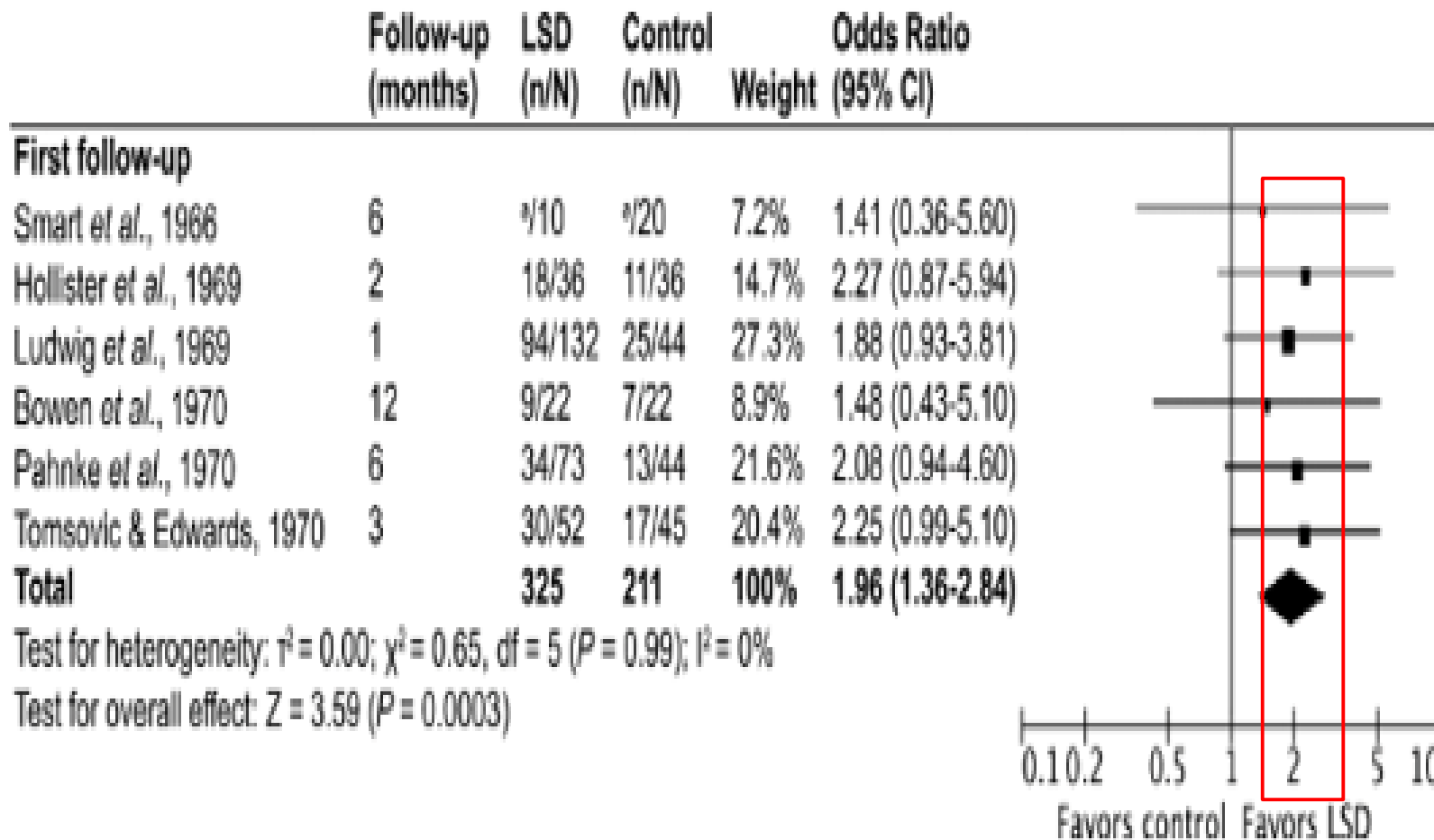
Kinetics: LSD

Onset:	30-45 min
Peak:	1-2.5 hours
Duration:	9-12 hours
Absorption:	GI
½ Life:	175 min
Oral bioavailability	71%



Outline

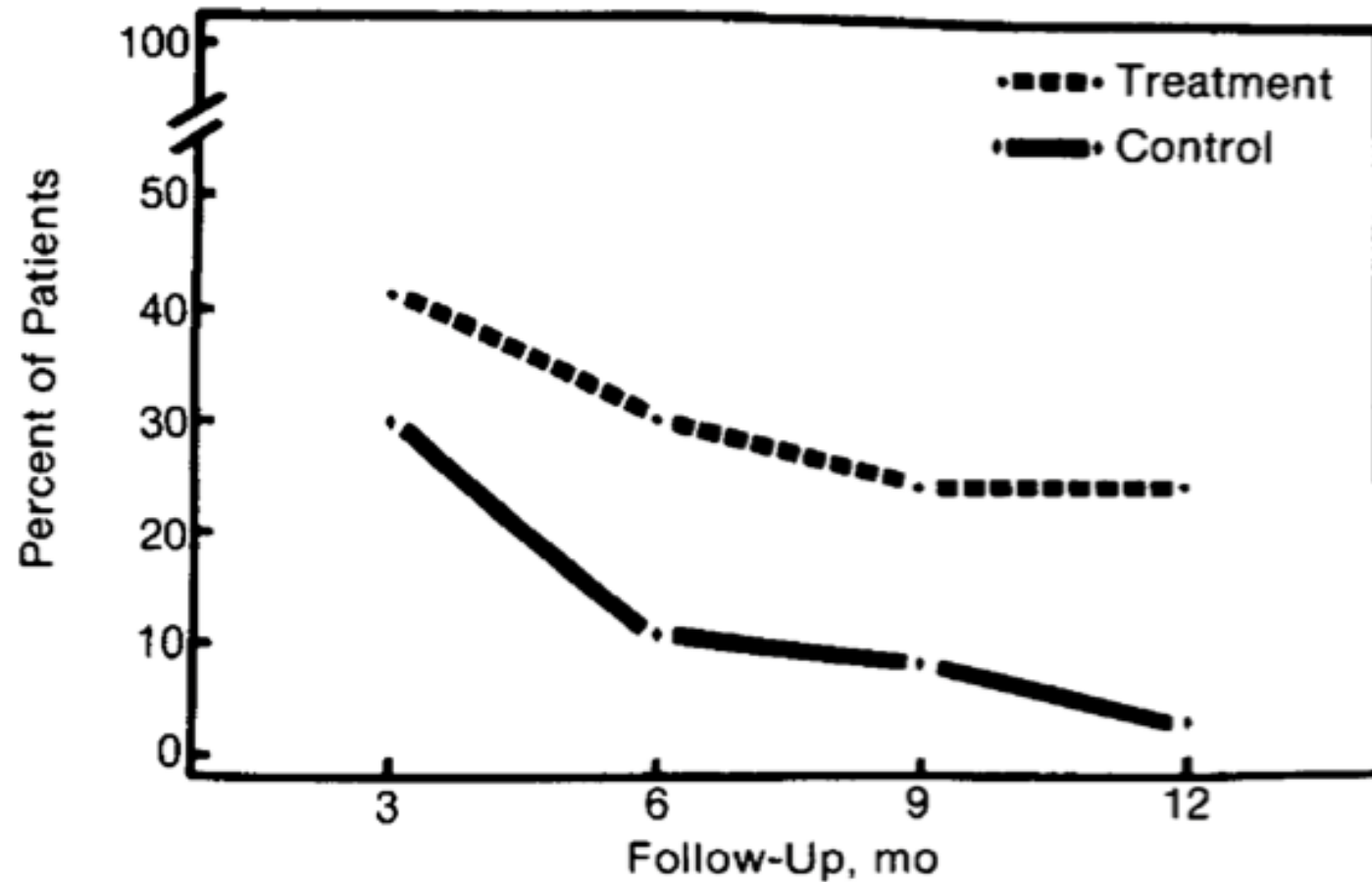
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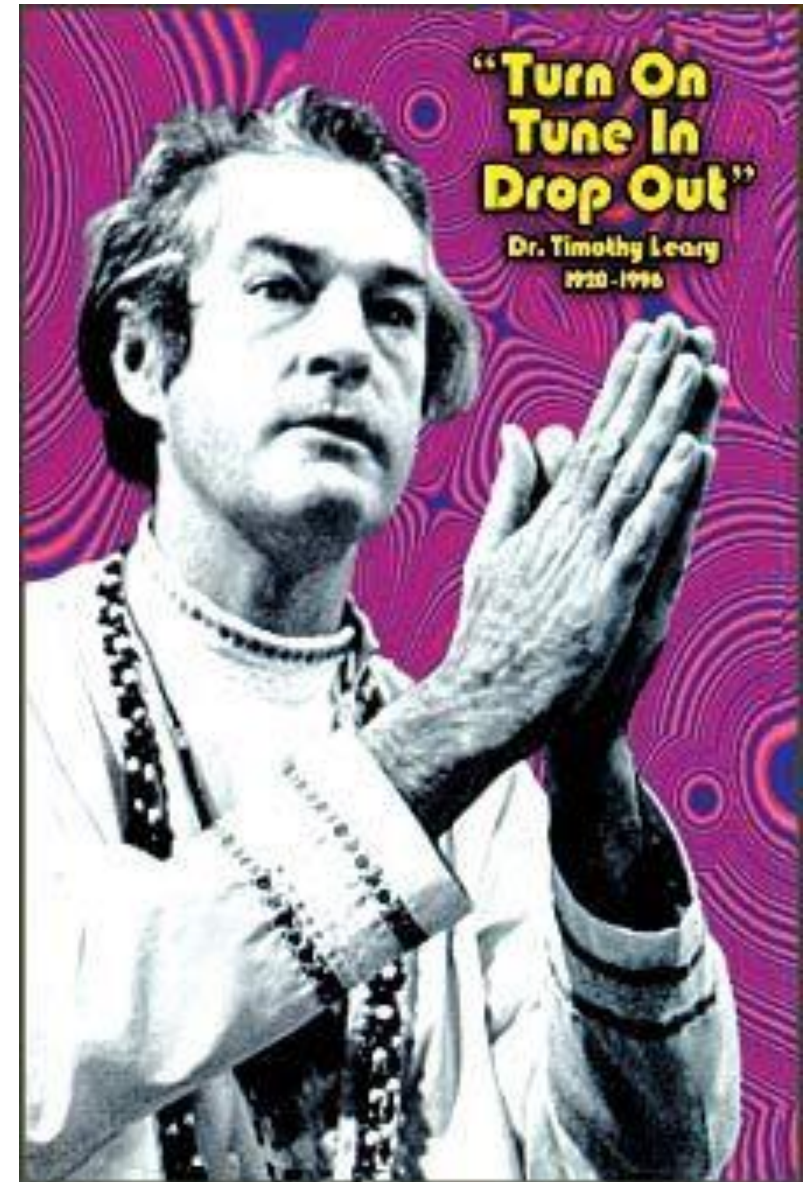
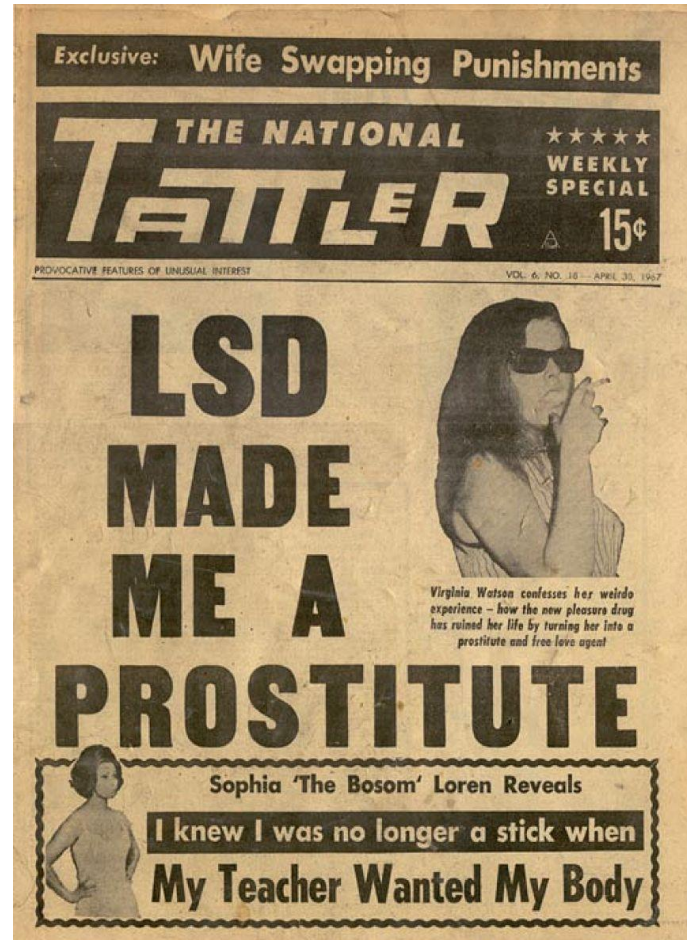
Fig 1.—Percent of patients maintaining total abstinence at 3-, 6-, 9-, and 12-month follow-up.



Savage C, McCabe OL. Residential psychedelic (LSD) therapy for the narcotic addict. A controlled study. *Arch Gen Psychiatry*. 1973;28(6):808-814.
doi:10.1001/archpsyc.1973.01750360040005

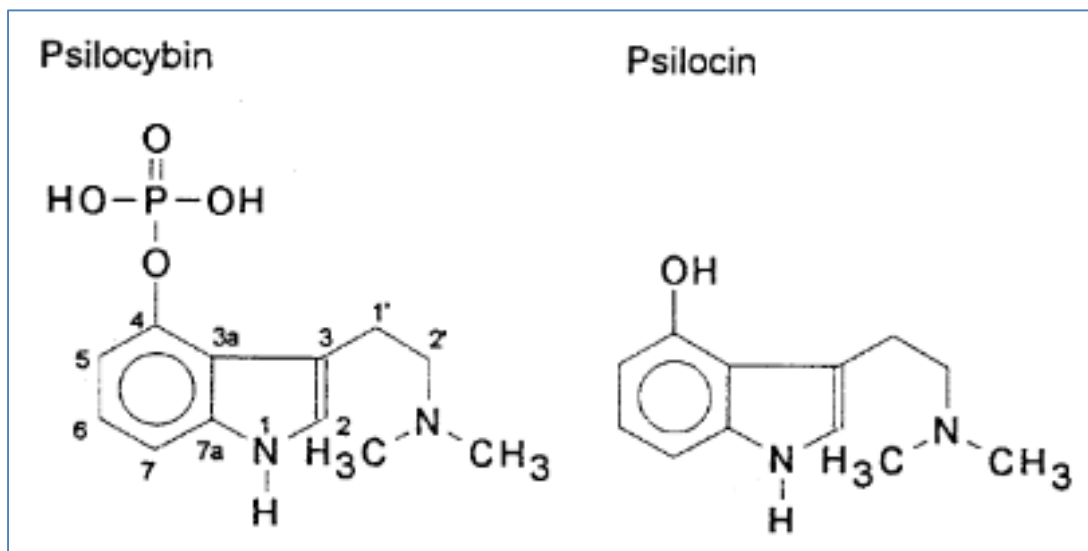
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Geiger HA, Wurst MG, Daniels RN. DARK classics in chemical neuroscience: psilocybin. *ACS Chem Neurosci*. 2018;9(10):2438-2447. doi:10.1021/acchemneuro.8b00186

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LETTERS TO THE EDITOR

Clinical-scientific notes

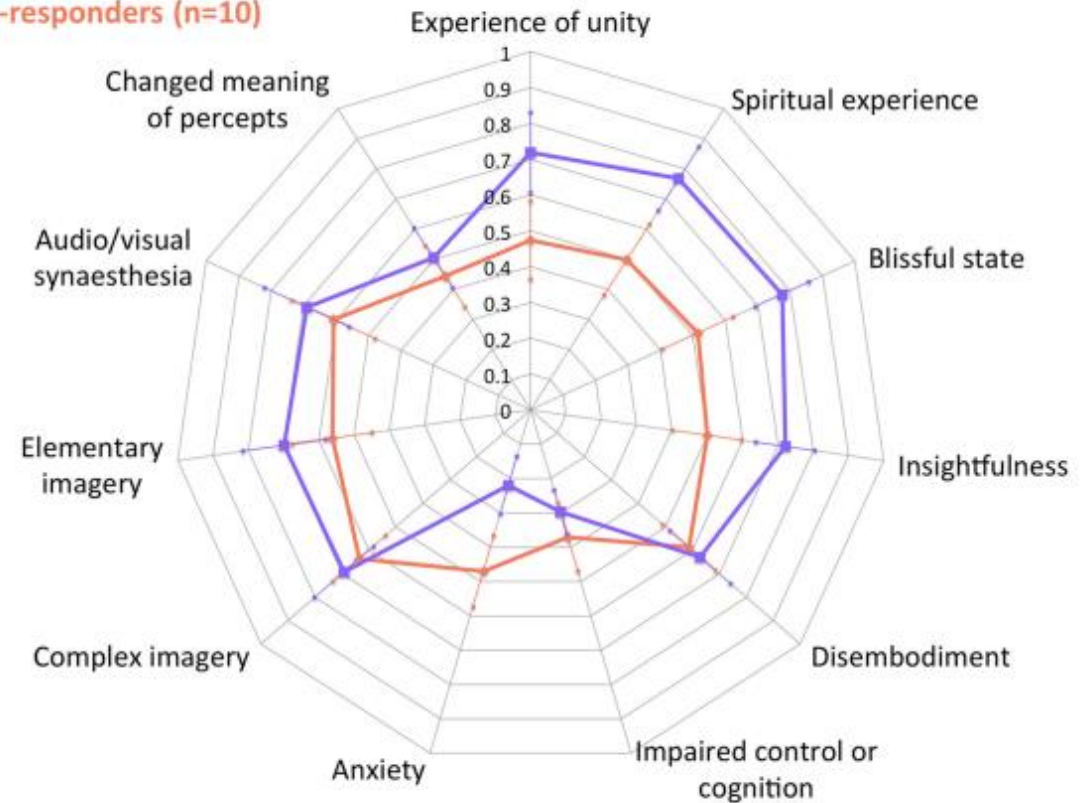
A fatal case of 'magic mushroom' ingestion in a heart transplant recipient

Kinetics: Psilocybin

Onset:	1-hour
Peak:	2-hours
Duration:	6-hours
Absorption:	GI, 50% via hepatic
½ Life:	PO – 163 min +/- 64 min, IV 74 min +/- 19.6 min

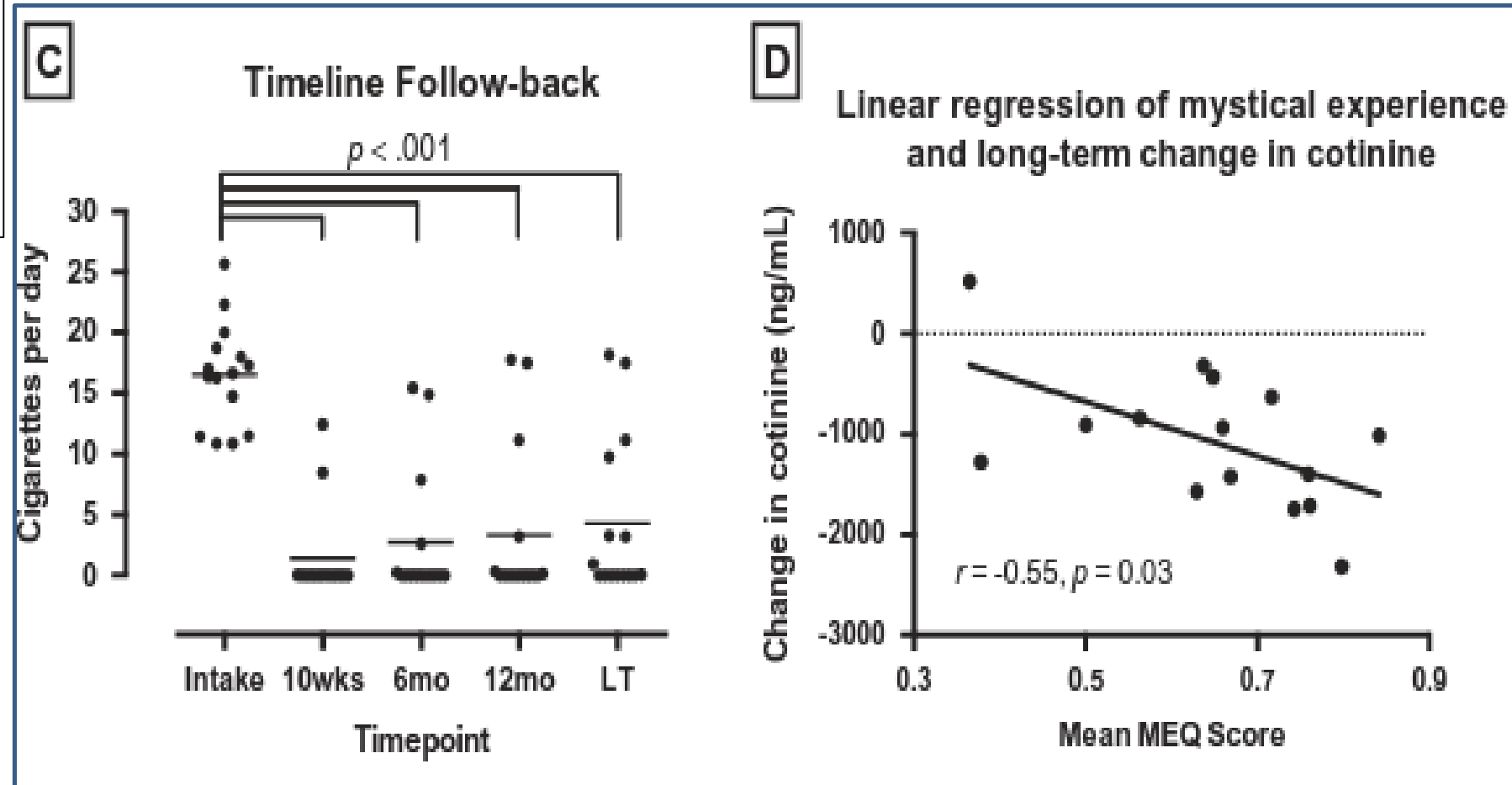
Responders (n=9)

Non-responders (n=10)



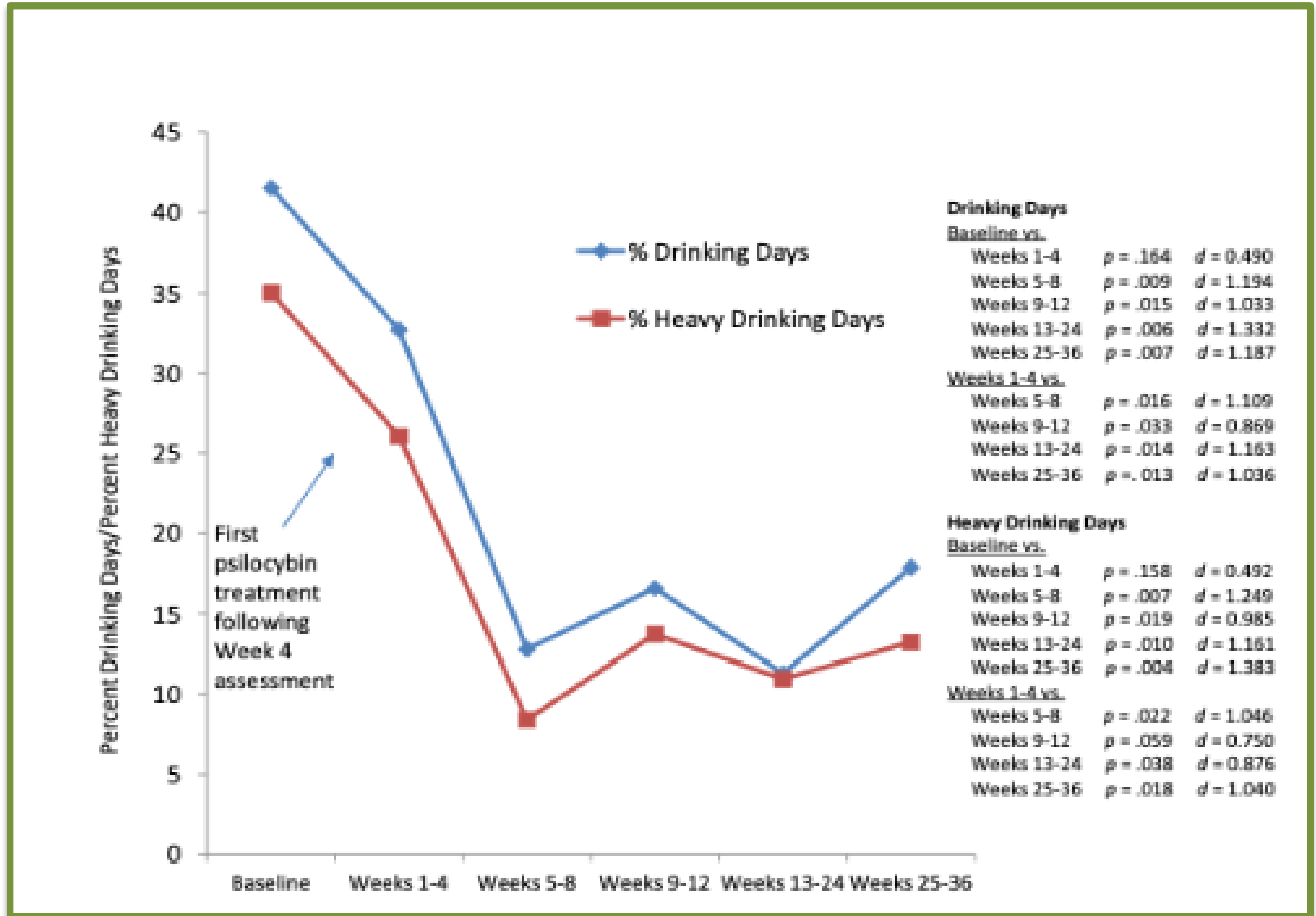
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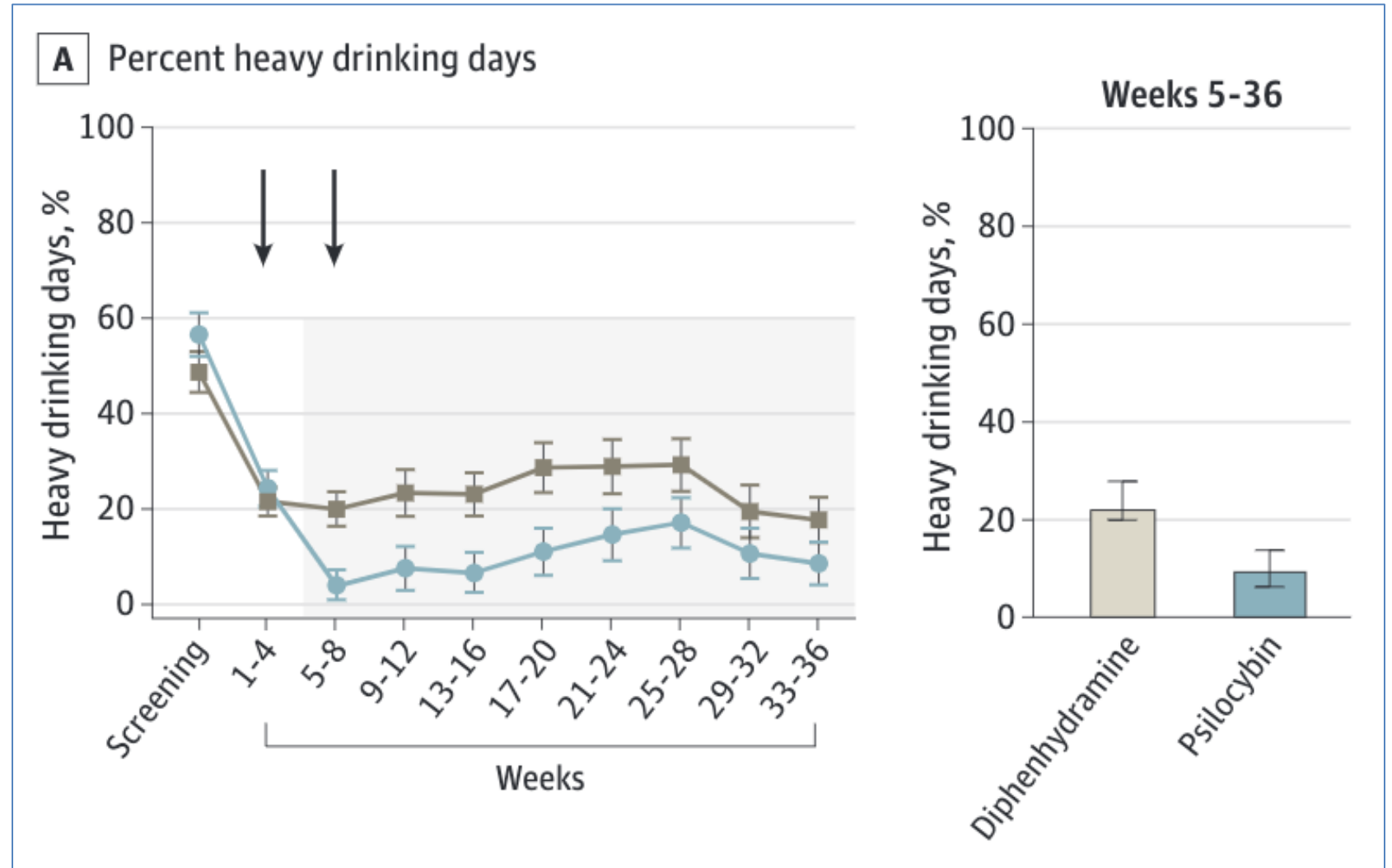
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Bogenschutz, M.P., Forcehimes, A.A., Pommy, J.A., Wilcox, C.E., Barbosa, P.C.R. and Strassman, R.J. 2015. Psilocybin-assisted treatment for alcohol dependence: a proof-of-concept study. *Journal of Psychopharmacology* 29(3), pp. 289–299.

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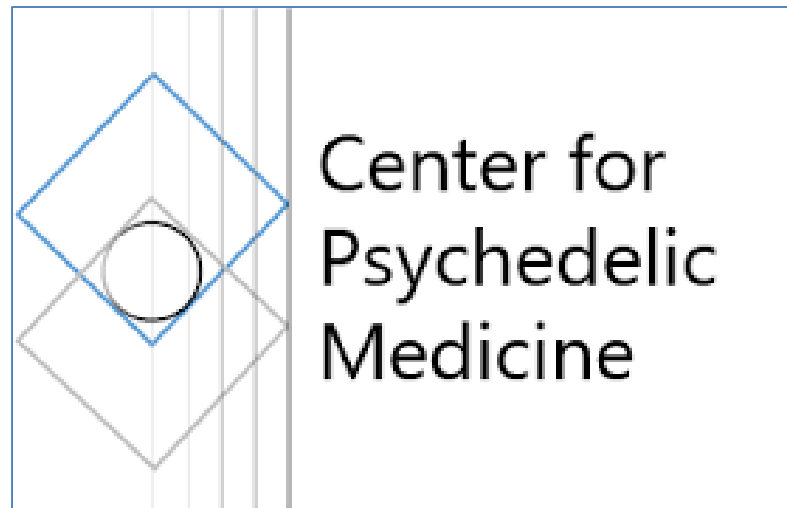
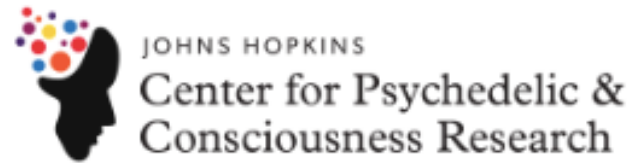
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Bogenschutz MP, Ross S, Bhatt S, Baron T, Forcehimes AA, Laska E, et al. Percentage of Heavy Drinking Days Following Psilocybin-Assisted Psychotherapy vs Placebo in the Treatment of Adult Patients With Alcohol Use Disorder: A Randomized Clinical Trial. JAMA Psychiatry. 2022 Aug 24;

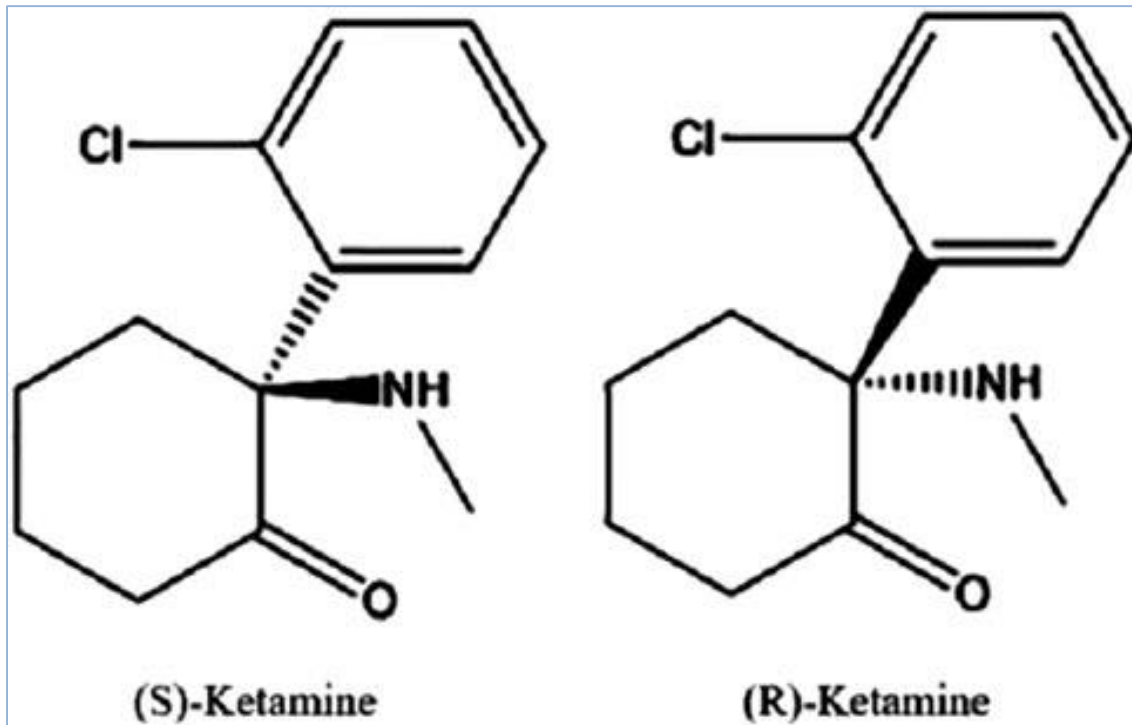
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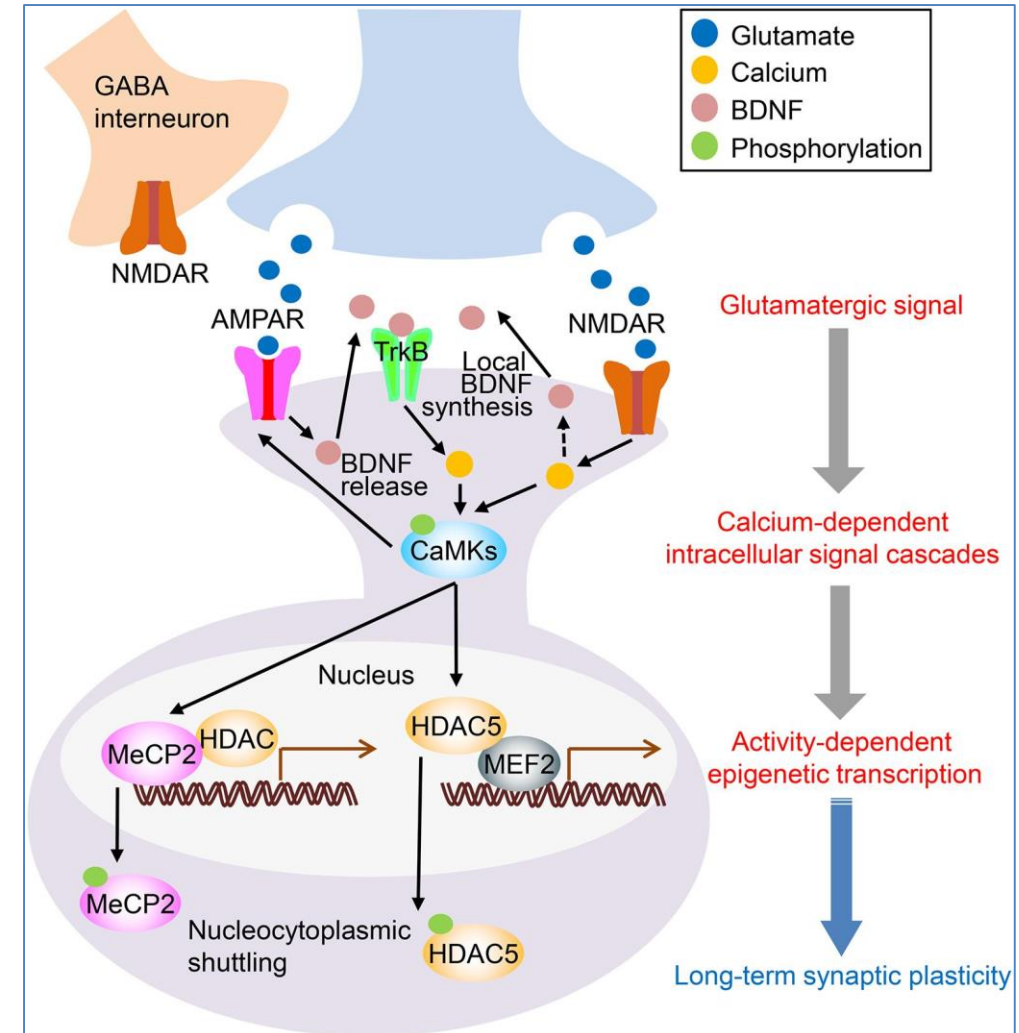


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doi:10.1007/s00213-007-0706-

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Kinetics: Ketamine	
Onset (IV/IM)	IV: 30 seconds IM: 3-4 min
Peak (IV/IM) :	20 min/20 -120 Min
Duration:	variable
Bioavailability:	IM: 93%, Oral: 20%
½ Life:	10-15 min
Metabolism:	CYP2B8/3A4

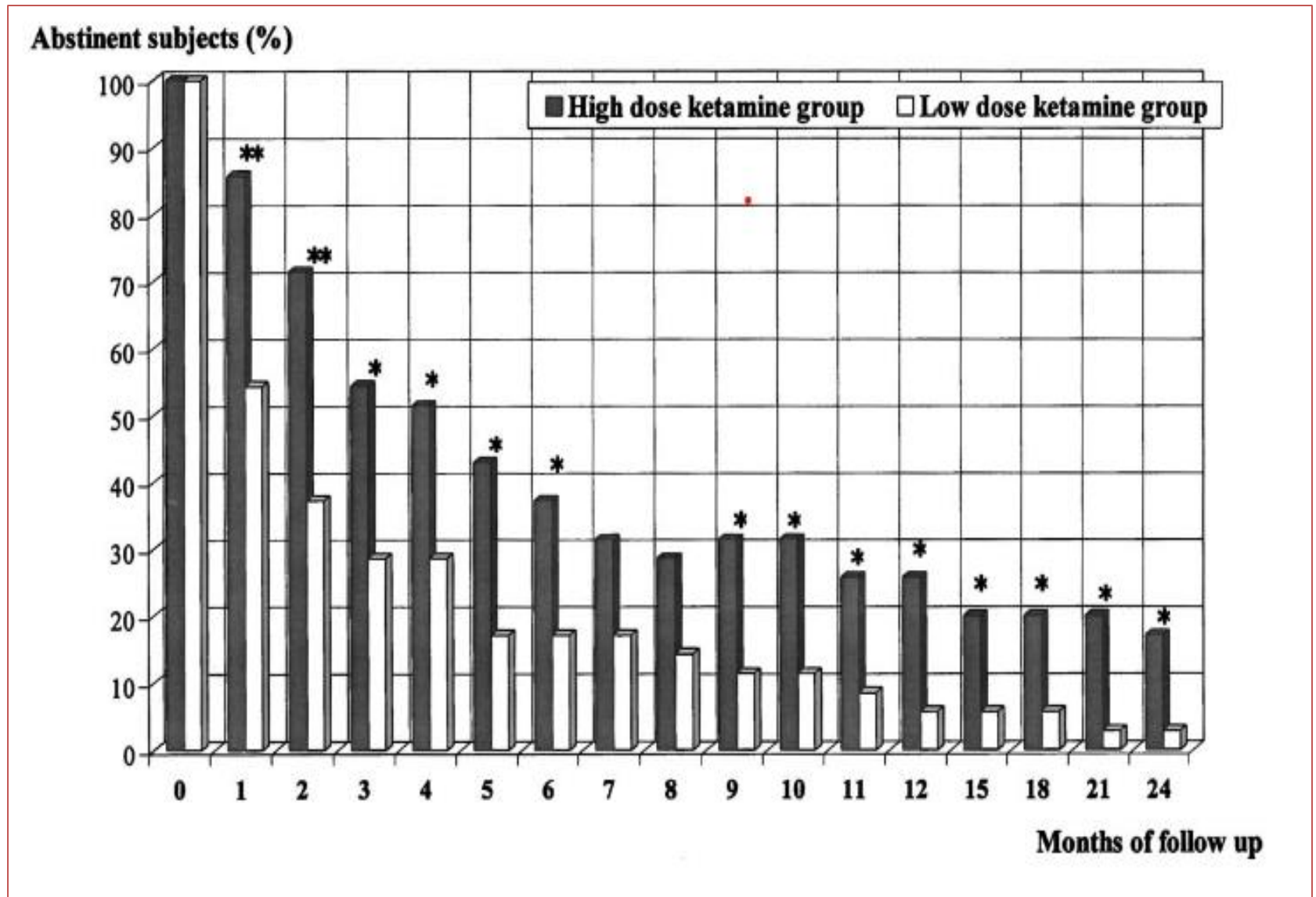


Mion G, Villeveille T. Ketamine pharmacology: an update (pharmacodynamics and molecular aspects, recent findings). *CNS Neurosci Ther.* 2013;19(6):370-380. doi:10.1111/cns.12099

Kawatake-Kuno A, Murai T, Uchida S. A multiscale view of the mechanisms underlying ketamine's antidepressant effects: an update on neuronal calcium signaling. *Front Behav Neurosci.* 2021;15:749180. doi:10.3389/fnbeh.2021.749180

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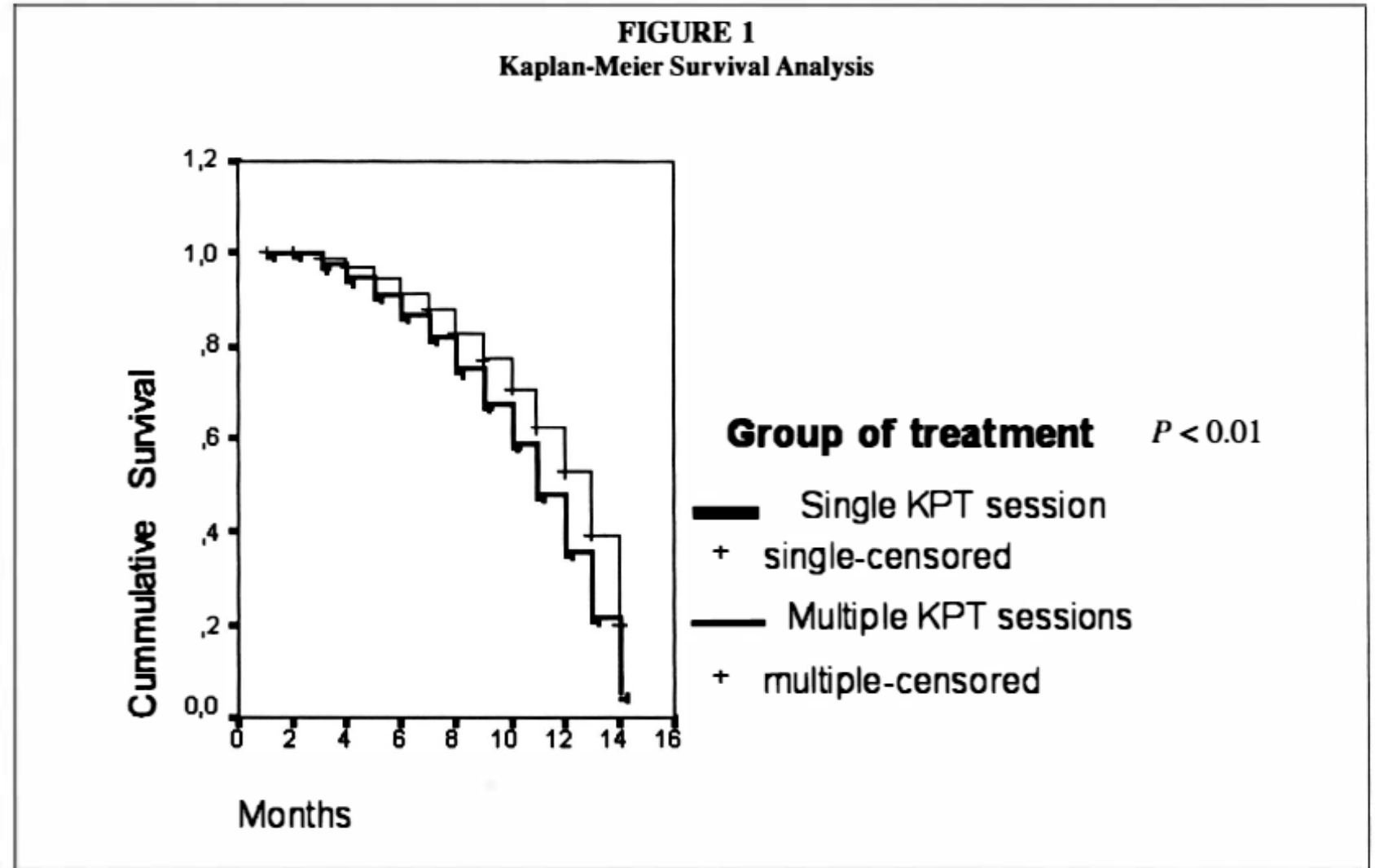
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Krupitsky E, Burakov A, Romanova T, Dunaevsky I, Strassman R, Grinenko A. Ketamine psychotherapy for heroin addiction: immediate effects and two-year follow-up. *J Subst Abuse Treat.* 2002 Dec;23(4):273–83.

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Krupitsky EM, Burakov AM, Dunaevsky IV, Romanova TN, Slavina TY, Grinenko AY. Single versus repeated sessions of ketamine-assisted psychotherapy for people with heroin dependence. J Psychoactive Drugs. 2007 Mar;39(1):13–9.

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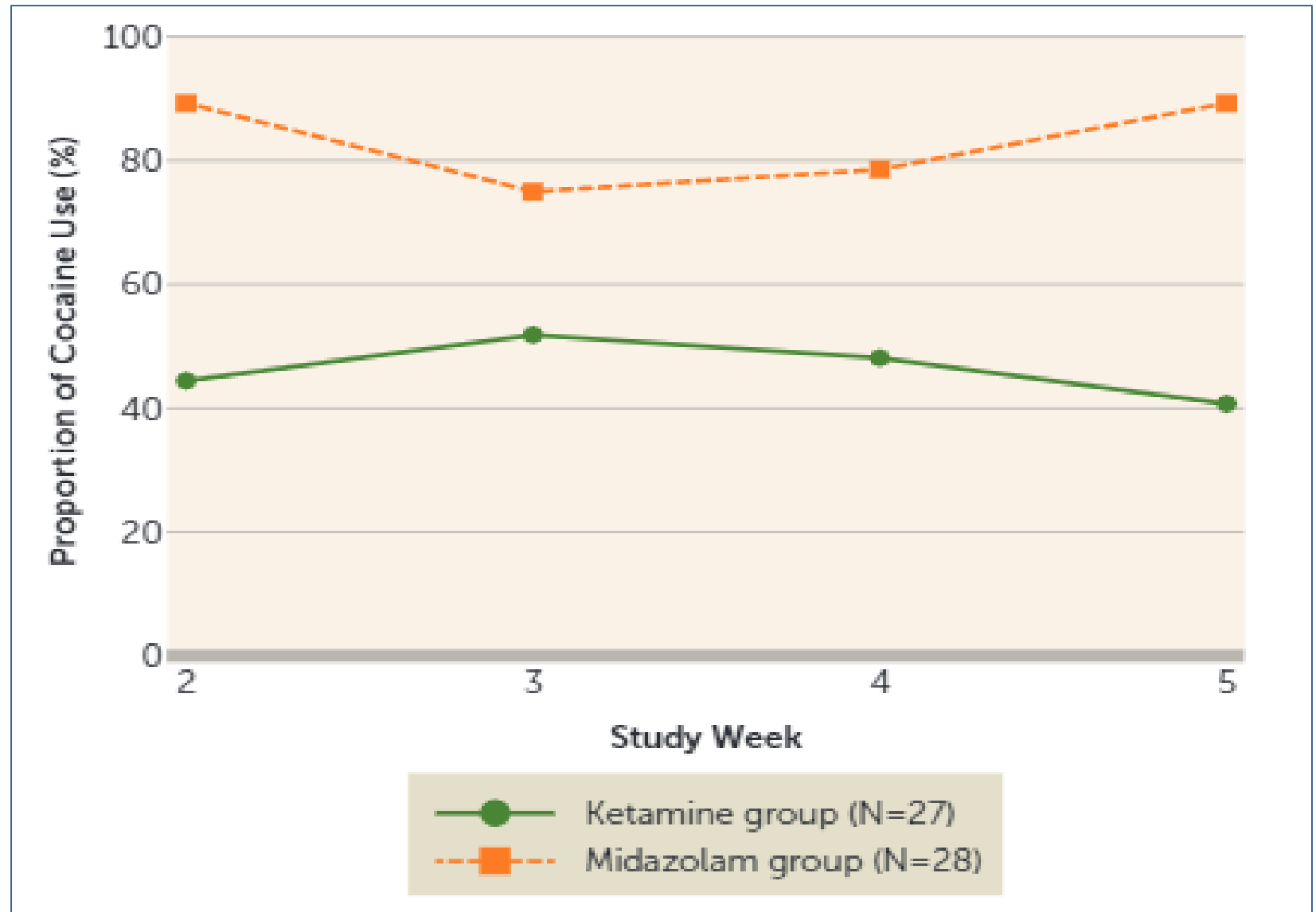
Ketamine Psychedelic Therapy (KPT): A Review of the Results of Ten Years of Research

E. M. Krupitsky & A. Y. Grinenko

To cite this article: E. M. Krupitsky & A. Y. Grinenko (1997) Ketamine Psychedelic Therapy (KPT): A Review of the Results of Ten Years of Research, *Journal of Psychoactive Drugs*, 29:2, 165-183, DOI: [10.1080/02791072.1997.10400185](https://doi.org/10.1080/02791072.1997.10400185)

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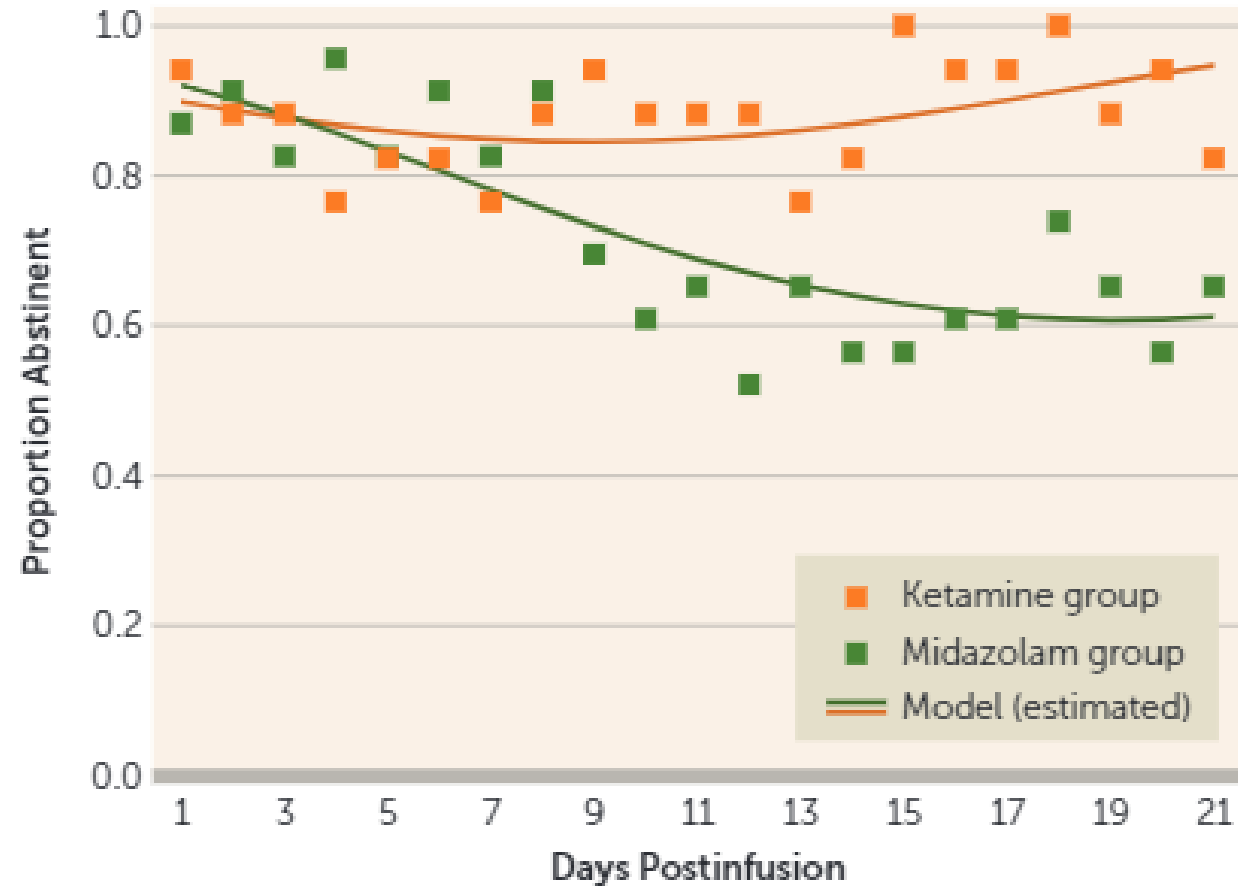


Dakwar E, Nunes EV, Hart CL, Foltin RW, Mathew SJ, Carpenter KM, et al. A Single Ketamine Infusion Combined With Mindfulness-Based Behavioral Modification to Treat Cocaine Dependence: A Randomized Clinical Trial. *Am J Psychiatry*. 2019 Nov 1;176(11):923–30.

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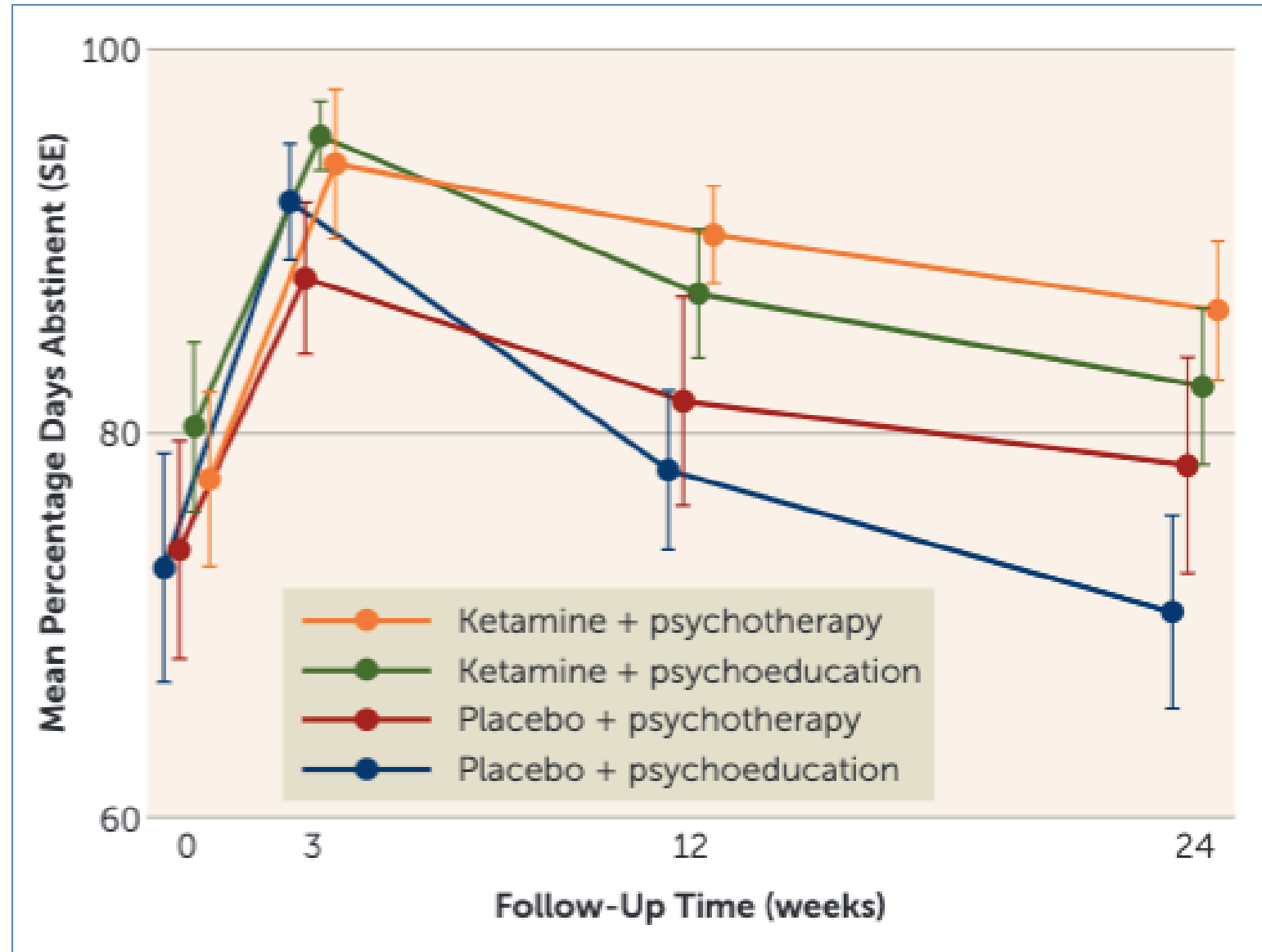
FIGURE 2. Observed and model-estimated proportions and standard errors of abstinence across the 21-day postinfusion period among study participants receiving ketamine or midazolam (N=40)



Dakwar E, Levin F, Hart CL, Basaraba C, Choi J, Pavlicova M, et al. A Single Ketamine Infusion Combined With Motivational Enhancement Therapy for Alcohol Use Disorder: A Randomized Midazolam-Controlled Pilot Trial. *Am J Psychiatry*. 2020 Feb 1;177(2):125–33.

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Grabski M, McAndrew A, Lawn W, et al. Adjunctive Ketamine With Relapse Prevention-Based Psychological Therapy in the Treatment of Alcohol Use Disorder. *Am J Psychiatry*. 2022;179(2):152-162. doi:10.1176/appi.ajp.2021.21030277

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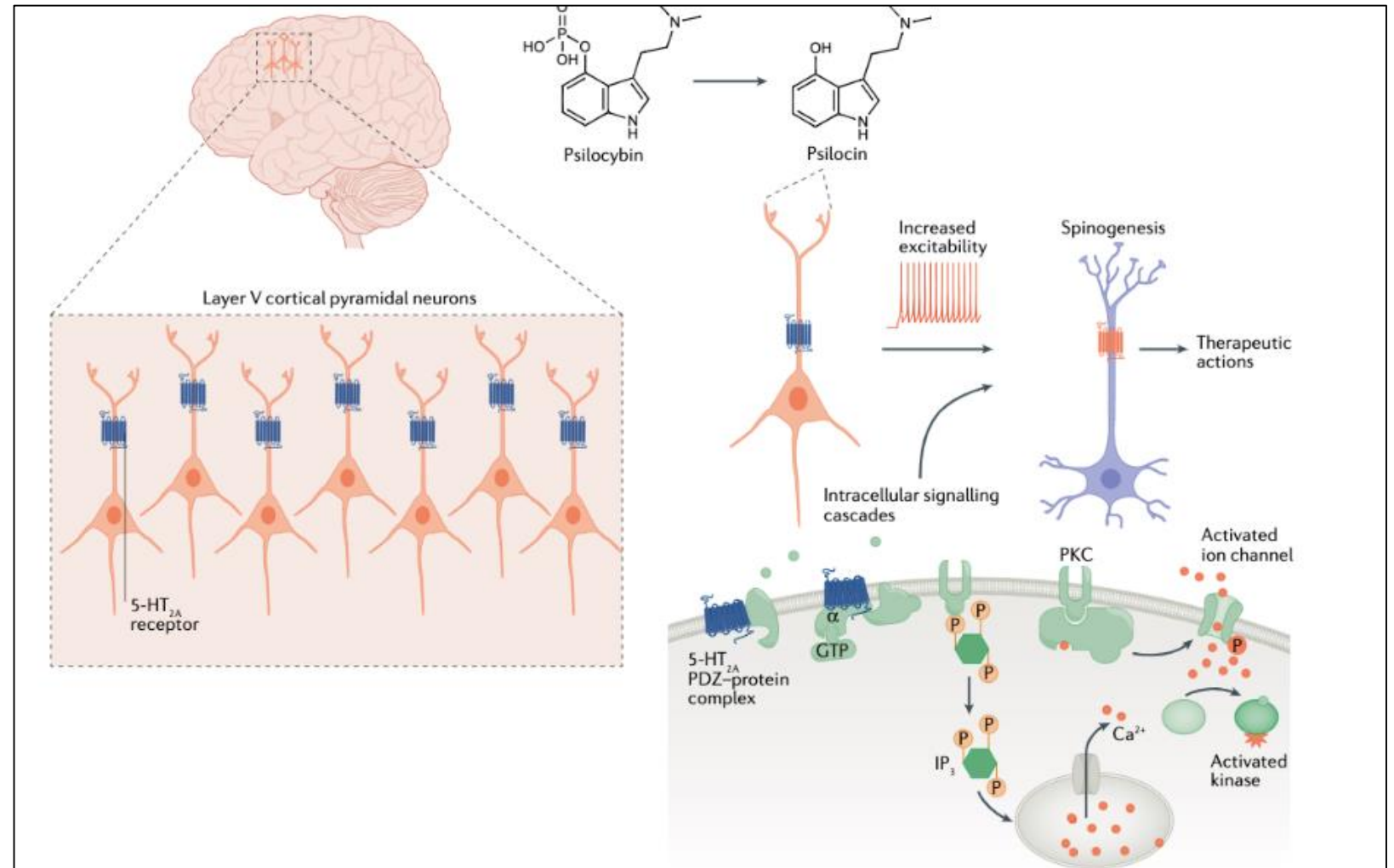


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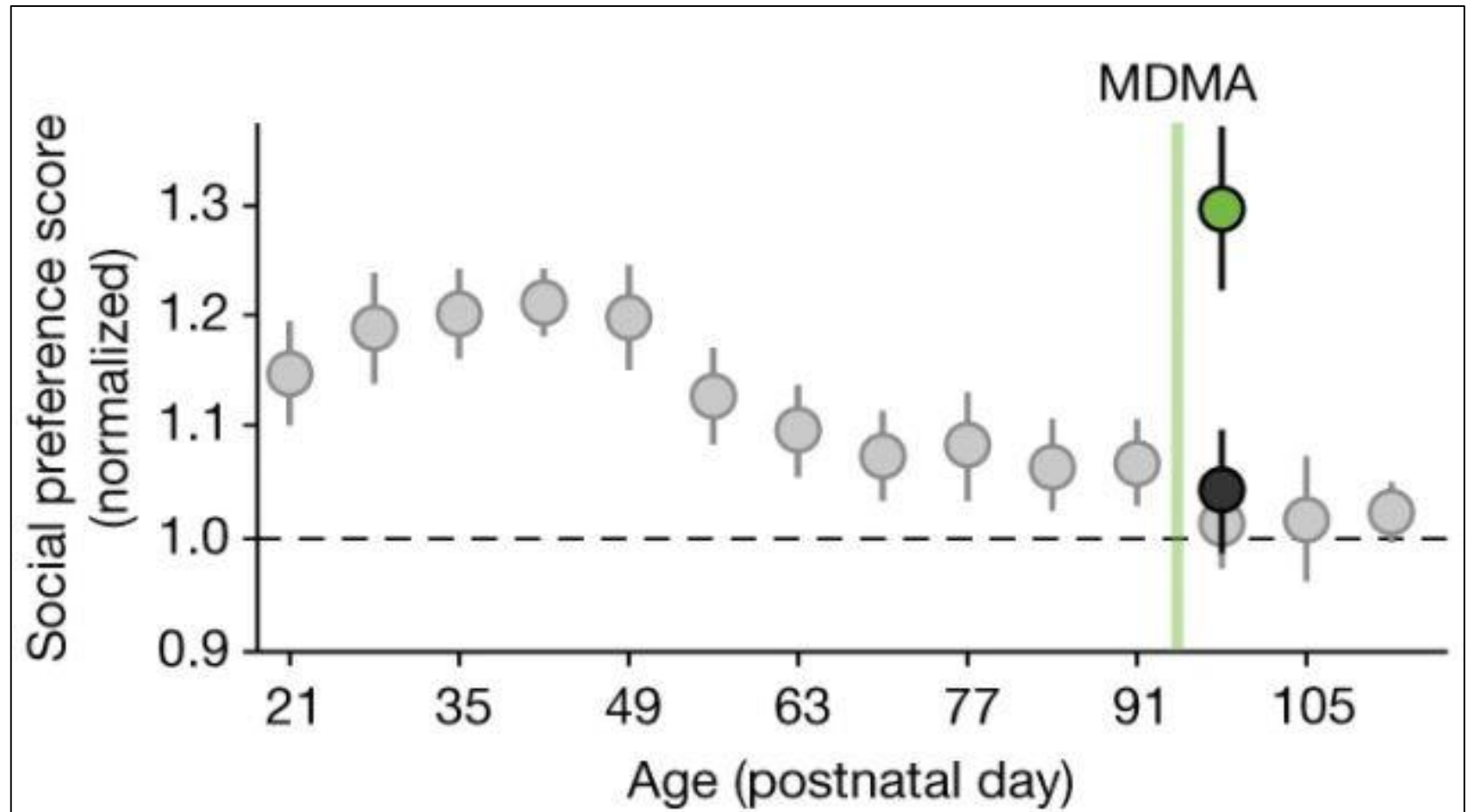
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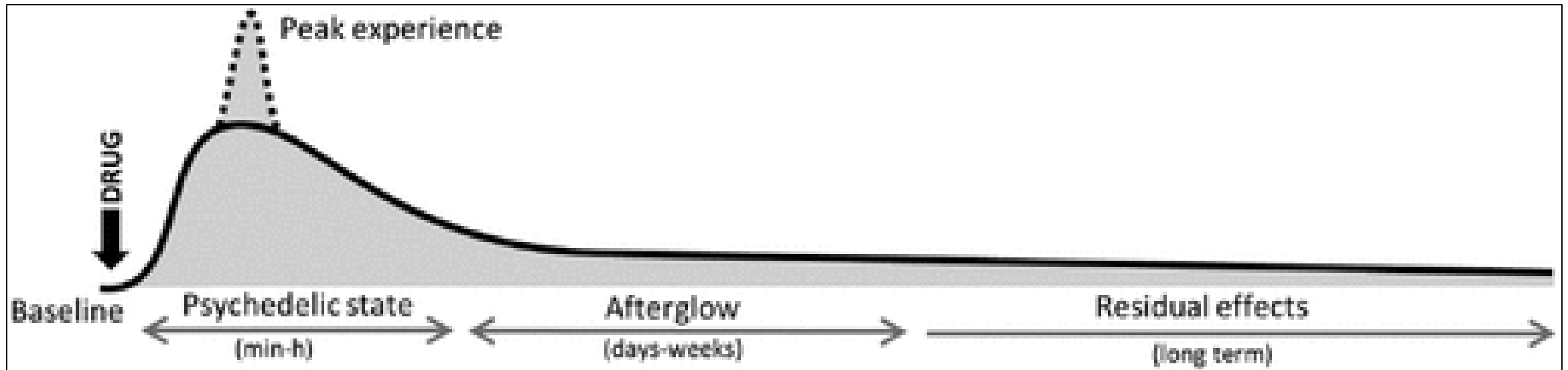
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Nardou R, Lewis EM, Rothhaas R, et al. Oxytocin-dependent reopening of a social reward learning critical period with MDMA. *Nature*. 2019;569(7754):116-120. doi:10.1038/s41586-019-1075-9

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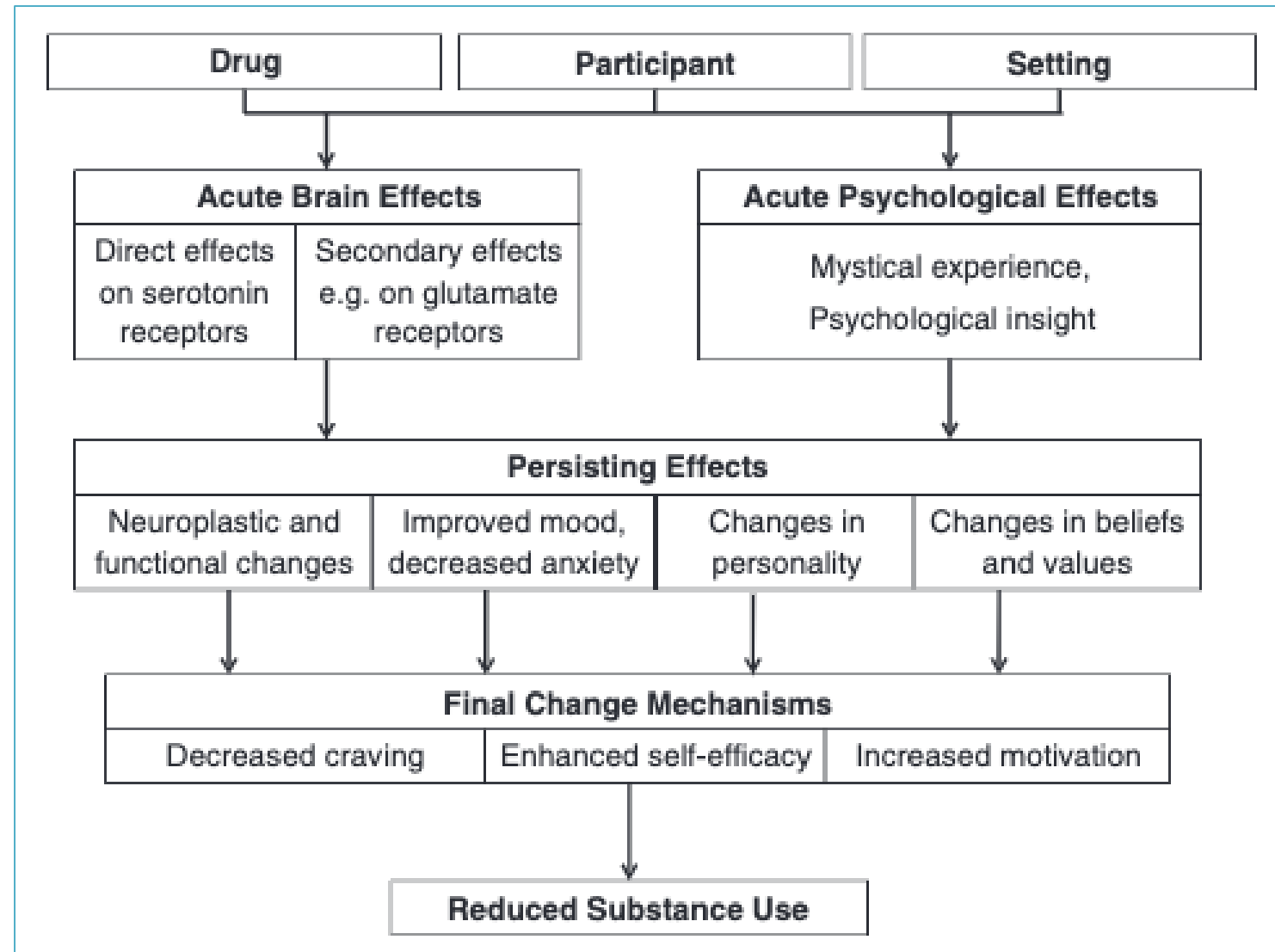


Noorani T, Garcia-Romeu A, Swift TC, Griffiths RR, Johnson MW. Psychedelic therapy for smoking cessation: Qualitative analysis of participant accounts. *J Psychopharmacol (Oxford)*. 2018;32(7):756-769. doi:10.1177/0269881118780612

Majić T, Schmidt TT, Gallinat J. Peak experiences and the afterglow phenomenon: when and how do therapeutic effects of hallucinogens depend on psychedelic experiences? *J Psychopharmacol (Oxford)*. 2015;29(3):241-253. doi:10.1177/0269881114568040

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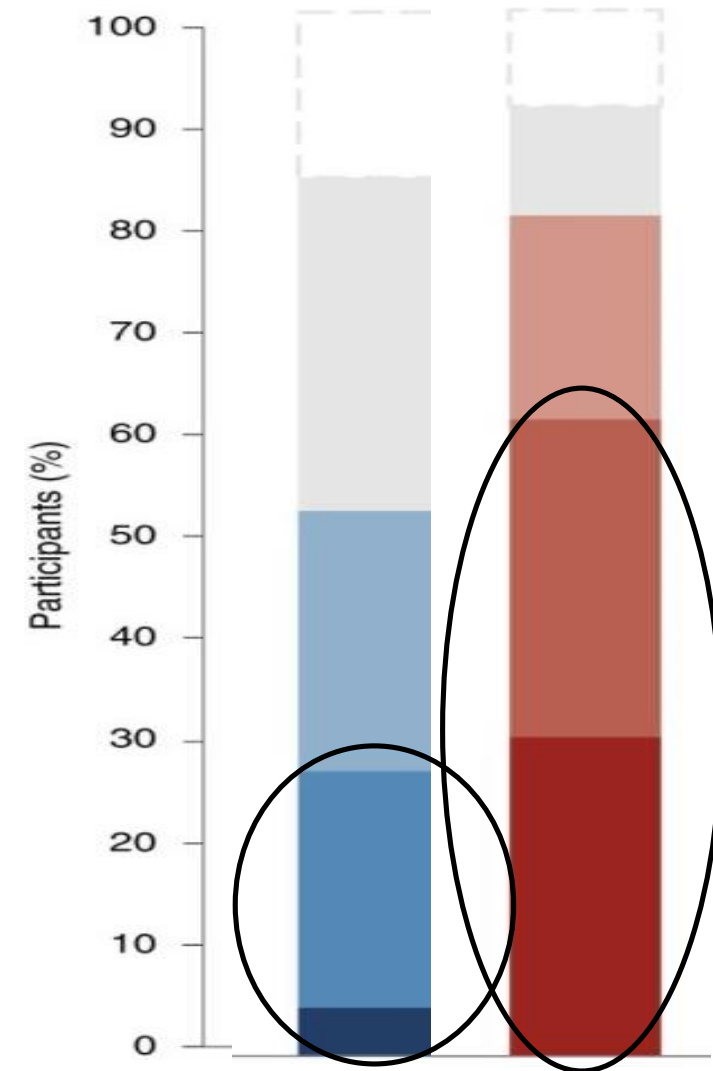
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Johnson M, Richards W, Griffiths R. Human hallucinogen research: guidelines for safety. *J Psychopharmacol (Oxford)*. 2008;22(6):603-620.
doi:10.1177/0269881108093587

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Mitchell JM, Bogenschutz M, Lilienstein A, et al. MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study. *Nat Med.* 2021;27(6):1025-1033. doi:10.1038/s41591-021-01336-3

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ClinicalTrials.gov



psychedelic.support

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Jim Grigsby

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Questions?

**Please feel free to email me:
nathan9@uw.edu**

History

Grinspoon, L. Balakar, J.B. (1997) Psychedelic drugs reconsidered. New York: Lindersmith Center.

Nichols DE, Walter H. The history of psychedelics in psychiatry. *Pharmacopsychiatry*. 2021;54(4):151-166. doi:10.1055/a-1310-3990

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Epidemiological Studies

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Jones G, Ricard JA, Lipson J, Nock MK. Associations between classic psychedelics and opioid use disorder in a nationally-representative U.S. adult sample. *Sci Rep*. 2022;12(1):4099. doi:10.1038/s41598-022-08085-4

Jones GM, Nock MK. Exploring protective associations between the use of classic psychedelics and cocaine use disorder: a population-based survey study. *Sci Rep*. 2022;12(1):2574. doi:10.1038/s41598-022-06580-2

Psilocybin

Geiger HA, Wurst MG, Daniels RN. DARK classics in chemical neuroscience: psilocybin. *ACS Chem Neurosci*. 2018;9(10):2438-2447. doi:10.1021/acscemneuro.8b00186

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Hasler F, Bourquin D, Brenneisen R, Vollenweider FX. Renal excretion profiles of psilocin following oral administration of psilocybin: a controlled study in man. *J Pharm Biomed Anal*. 2002;30(2):331-339. doi:10.1016/S0731-7085(02)00278-9

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