

Red Light Oregon: Market Research and Microdosing Safety Report For Measure 109

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Introduction

This market research study is aimed to gather insights on the likely beneficiaries of Measure 109 and the legalization of Psilocybin Services by the Oregon Health Authority for adults in Oregon. The research will hopefully help support the Oregon Psilocybin Advisory Board (OPAB) and health officials in making data-informed regulations. The research specifically focused on equity and accessibility questions looking at demographic predictors that might prevent some adults in Oregon from benefiting from the measure.

Measure 109 will make Psilocybin Services available to individuals 21 years and older in Oregon who think they can benefit from them, without a need for medical diagnosis. The services must include a preparation session, a psilocybin administration session in a licensed facility supervised by a licensed facilitator, and a possibility of an integration session. On or before December 31, 2022, the Oregon Health Authority will prescribe forms and regulations necessary for the exact implementation.

The market research utilized an online survey with 15 questions answered by 473 Oregonians. There were also 7 demographic questions used for the quota sampling with quota based on Oregon demographic data: sex assigned at birth, age, race, income level, education level.

The survey was powered by Dynata Insights Platform to ensure accurate quota sampling. The data was analyzed by data scientist Alicia Chen.

In addition, a literature review was conducted by Dr. Rohit Singh, A Ph.D. Organic Chemist and a Research Assistant Professor in the Center for Drug Design - the University of Minnesota, to assess the safety of long term activation of 5ht2b receptors by microdosing psilocybin.

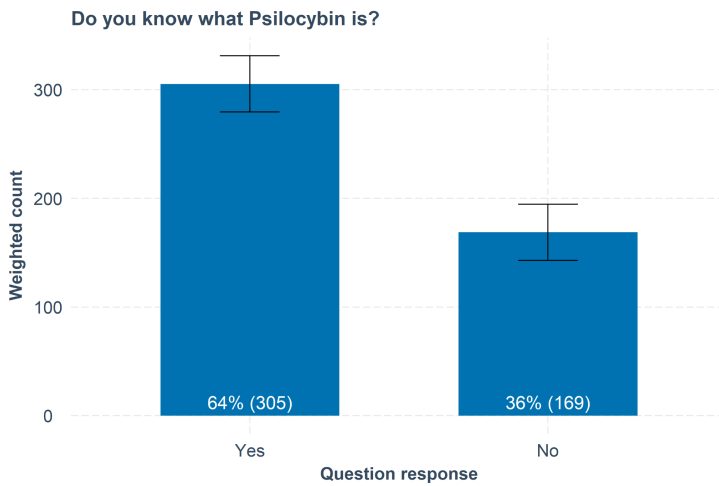
Results

Question 1

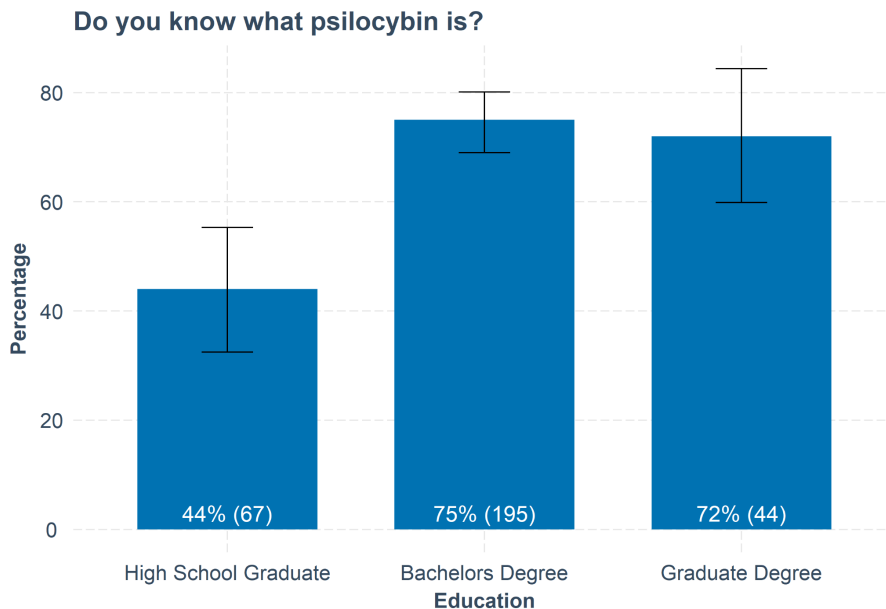
In 2020 Oregon passed Measure 109 called the “Oregon Psilocybin Services Act” a program for administering psilocybin products, such as psilocybin-producing mushrooms and fungi, to individuals aged 21 years or older.

Do you know what Psilocybin is??

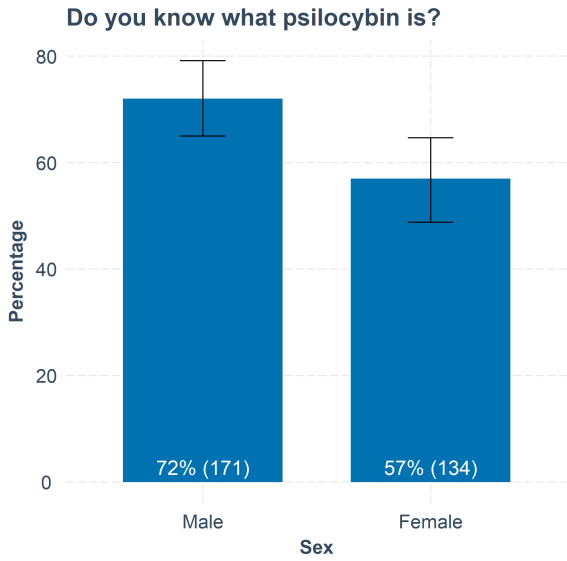
- A. Yes
- B. No



64% answered ‘yes’, while 36% answered ‘no’.



College education increased the likelihood of answering ‘yes’, with 75% of Bachelor’s degree recipients and 72% of Graduate degree recipients answering ‘yes’. 44% of those with a high school education answered ‘yes’.



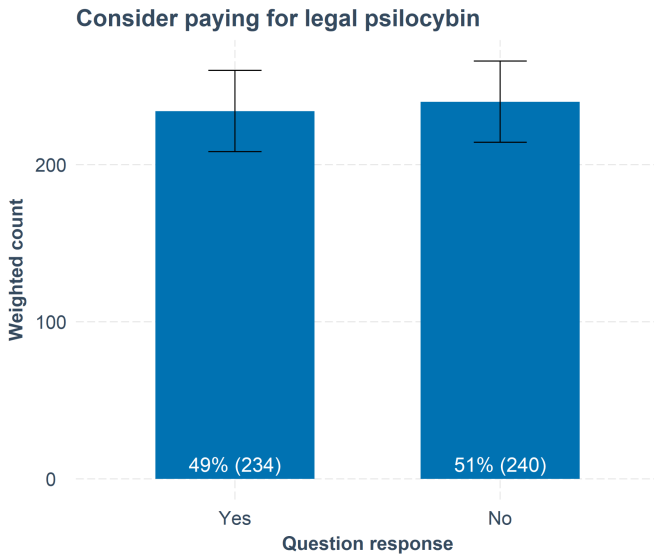
Assigned females at birth were statistically less likely to answer 'yes' than males assigned at birth, with 72% of males answering 'yes' and 57% of females.

Question 2

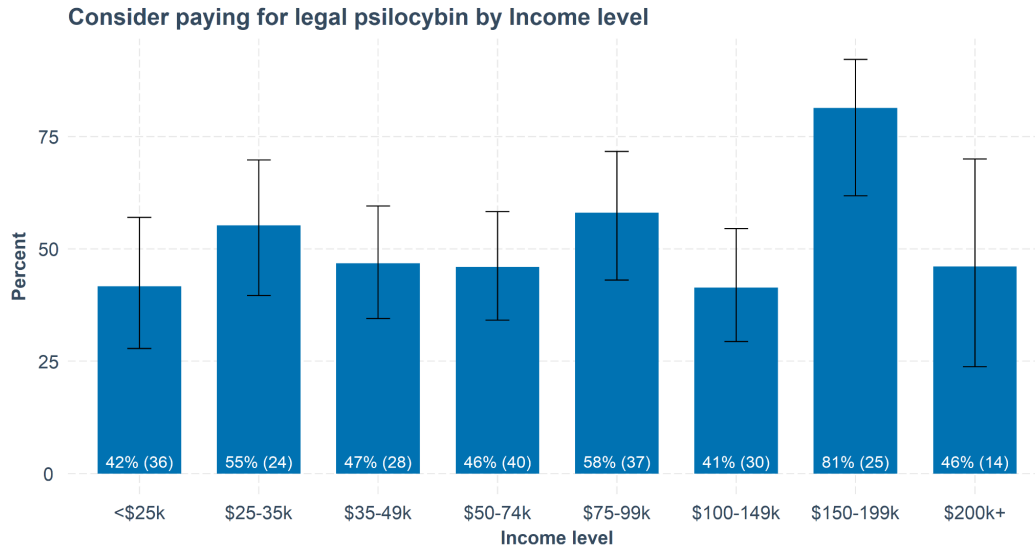
Psilocybin is a psychedelic substance that academic research shows can help reduce symptoms of depression, anxiety and PTSD as well as increase spontaneous creativity and divergent thinking.

Would you consider paying for legal administration of Psilocybin?

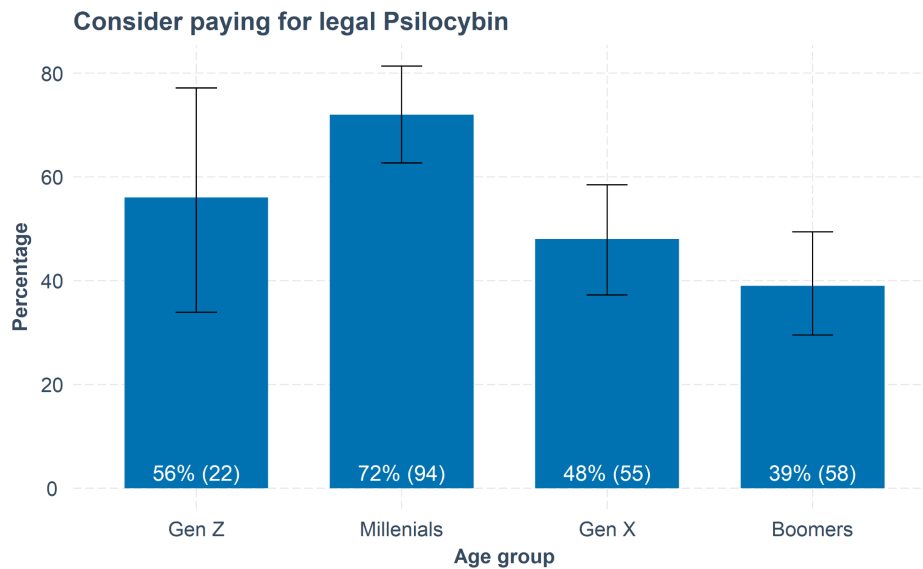
- A. Yes
- B. No



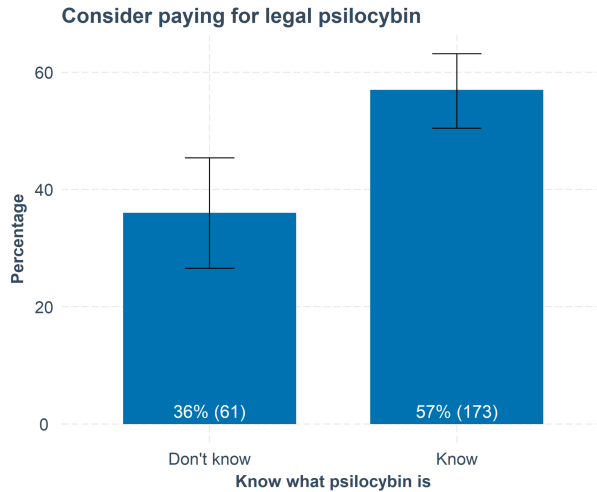
51% answered 'no', 49% answered 'yes'.



People in the income bracket between 150k-200k were statistically more likely to answer ‘yes’, than those in most income brackets below them.



72% of Millennials were statistically more likely to consider paying, only 39% of Boomers answered ‘yes’ and from Gen X, 48% answered ‘yes’. There was a non-significant trend for Gen Z to be more likely to consider payment, with 56% answering ‘yes’.



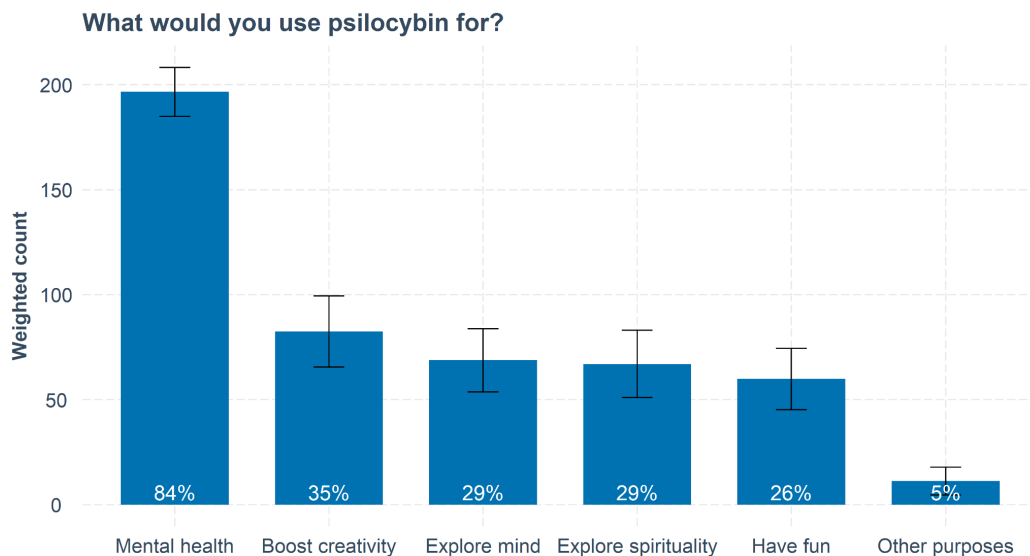
Having knowledge about what psilocybin is increases the likelihood of considering paying for legal psilocybin. 57% of those who knew what psilocybin is prior to the survey were willing to pay for it vs 36% of those who learned about psilocybin for the first time during the survey.

If people answered 'yes' to question 2 they were asked questions 3-7 and question 11. If they answered 'no' they were asked questions 12 -13.

Question 3

What would you want to use Psilocybin for? (can answer multiple)

- A. Help with depression, anxiety, PTSD or other mental health issues
- B. Increase my spontaneous creativity
- C. Explore my mind with psychedelics
- D. Explore my spirituality
- E. Have fun
- F. Other - write in





84% answered they would use psilocybin for, 'Help with mental health', 35% answered increase creativity, 29% explore their mind, 29% explored spirituality, 26% have fun and 5% chose other.

Question 4

Which scenarios of administering Psilocybin would interest you? (can answer multiple)

A.Psilocybin Therapy with a licensed therapist.

This would include a preparation session (1 hour), a day (6 hours) of taking psilocybin and an integration session (1 hour) done in a therapeutic setting that mimics a comfortable home environment.

B.Psilocybin guided experience with an educated facilitator who isn't a licensed therapist.

This would include a preparation session (1 hour), a day (6 hours) of taking psilocybin and an optional integration session (1 hour) done in a therapeutic setting that mimics a comfortable home environment.

C.Psilocybin guided group therapy session.

This would include a preparation session (1 hour), a day (6 hours) of taking psilocybin and an optional integration session (1 hour) done in a therapeutic setting that mimics a comfortable large home environment.

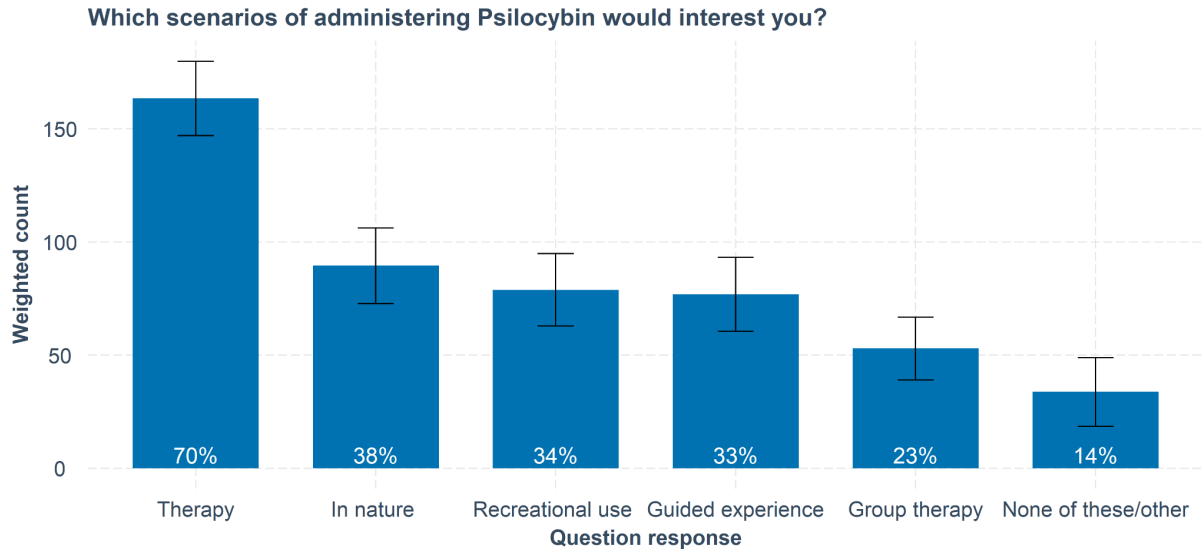
D.Psilocybin in nature supervised by a facilitator.

This would include a preparation session (1 hour), a day (6 hours) of taking psilocybin in nature supervised by a facilitator and an optional integration session (1 hour).

E.Psilocybin in a recreational setting like spa/massage/music performances/art exhibitions.

This would include a preparation session (1 hour), a day (6 hours) of taking psilocybin in a recreational setting supervised by a facilitator and an optional integration session (1 hour).

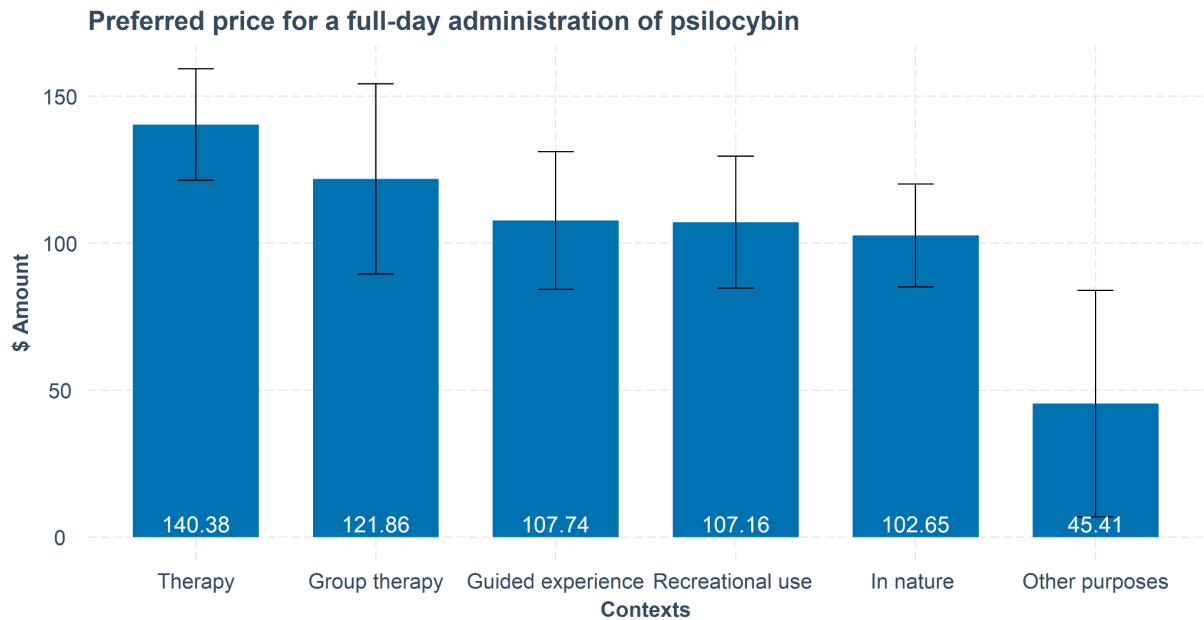
F. Other - write in.



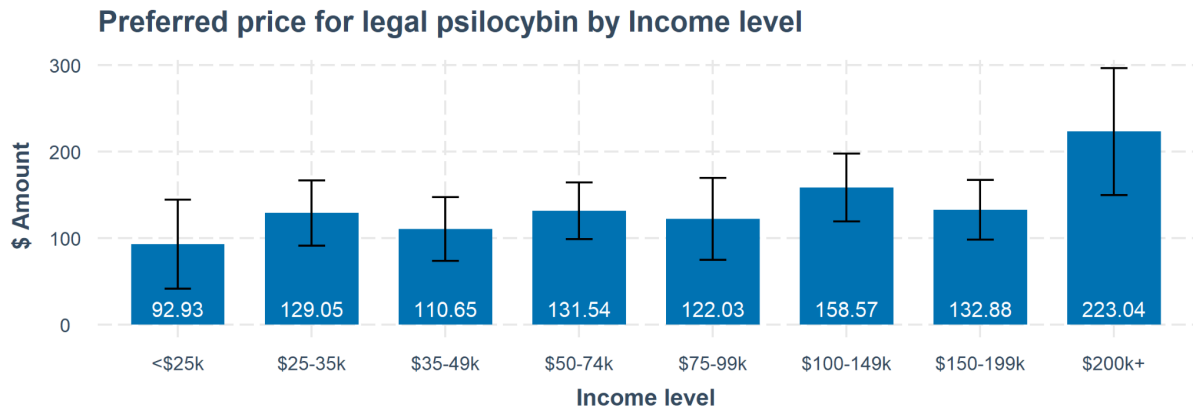
70% answered ‘therapy’, 38% answered ‘nature’, 34% answered ‘recreation’, 33% chose ‘guided experience with none-therapist’, 14% answered ‘none of the above/other.’

Question 5

For each of the services of interest, what would be the price you would be happy to pay for this service?” (Open ended question)



The preferred price for a therapy session was \$140, for group therapy \$121 for a guided experience with a non-therapist \$107, in nature \$102 and for other purposes \$45.

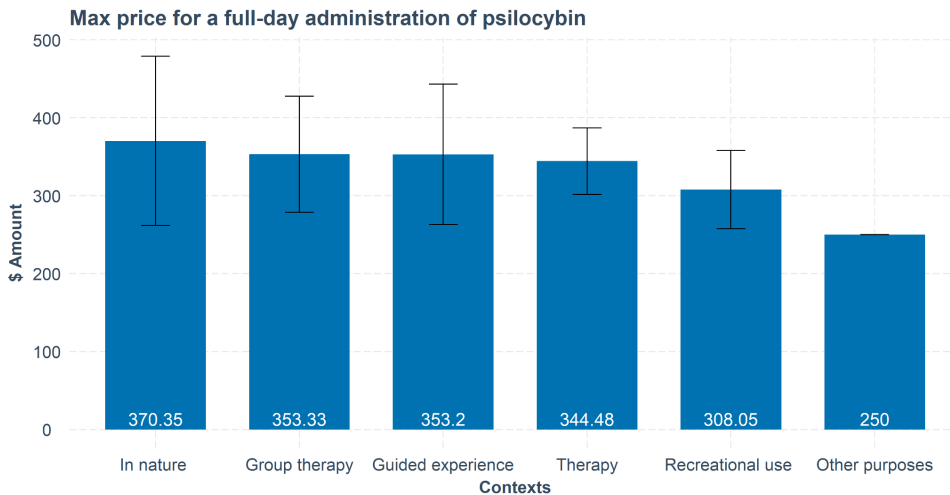


There was a statistically significant difference between the preferred price of the highest income bracket and the lowest income bracket. With the highest income bracket preferring to pay \$223.04 and the lowest income bracket preferring to pay \$92.93.

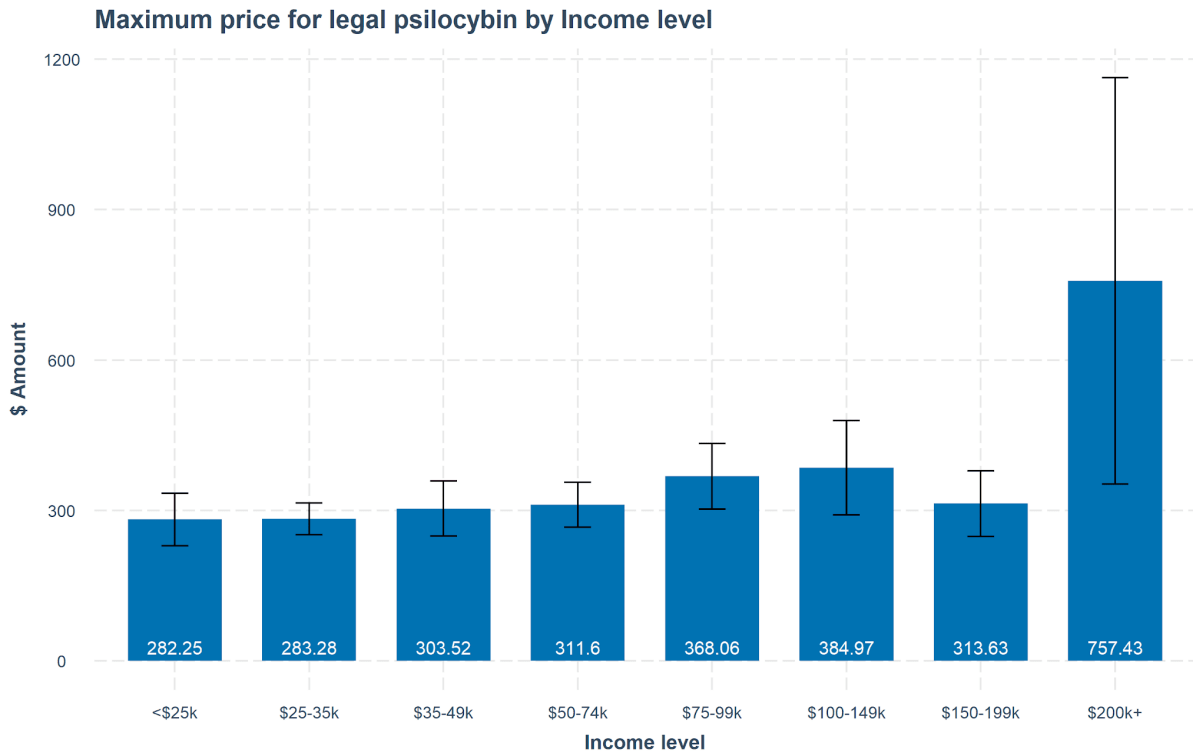
Question 6

For each of the services of interest, What would be the maximum price you would pay for a full day of this service?

- A. 250
- B. 500
- C. 1000
- D. 1500
- E. 3000



The maximum price was \$370 'in nature', \$353 for 'group therapy', \$353 'guided experience by a non-therapist', \$308 for 'recreational use' and \$250 for 'other purposes'.

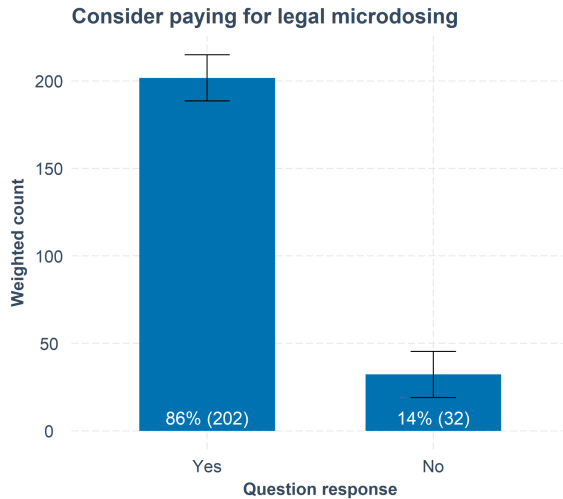


There was a statistically significant difference in maximum price between the highest income brackets with \$757 and the two lowest income brackets with \$282 for income bracket <\$25k and \$283.28 for income bracket \$25-35K

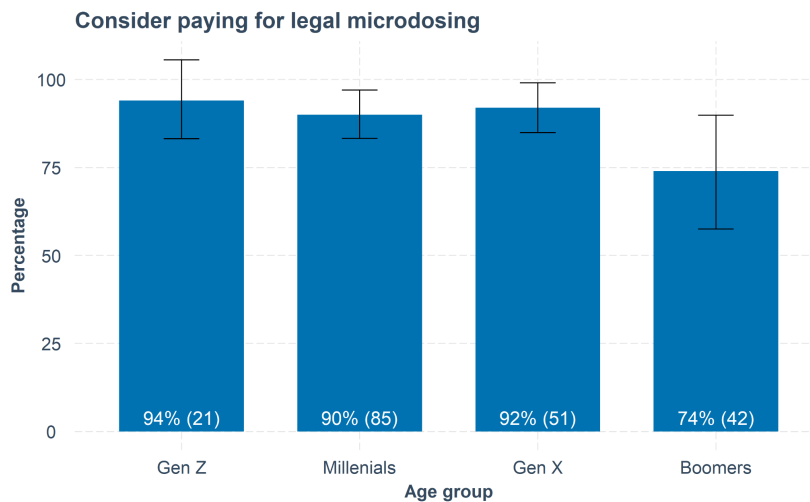
Question 7

Microdosing is the practice of taking lower doses of psilocybin that doesn't cause strong visual effects or large changes in your perception. Some academic research shows it can improve anxiety, depression or reduce pain. Would you consider paying for legal administration of microdosing?

- A. Yes
- B. No



86% answered 'yes', 14% answered 'no'.



While not statistically significant, there is a trend towards younger generations answering "yes" with 94% of Genz Z, 90% of Millennials, 92% of Gen X and only 74% of Boomers.

If answered yes to question 7 people were asked question 8-10

Question 8

Which of these scenarios of administering microdoses of Psilocybin would interest you? (can answer multiple)

A. Microdosing in a co-working space environment.

This would include a preparation session (15 min), a day (6 hours) of microdosing psilocybin in a co-working space supervised by a facilitator and an optional integration session (15 min).

B. Microdosing in a mindfulness workshop.

This would include a preparation session (15 min), a day (6 hours) of microdosing psilocybin and practicing meditation and mindfulness techniques with a facilitator

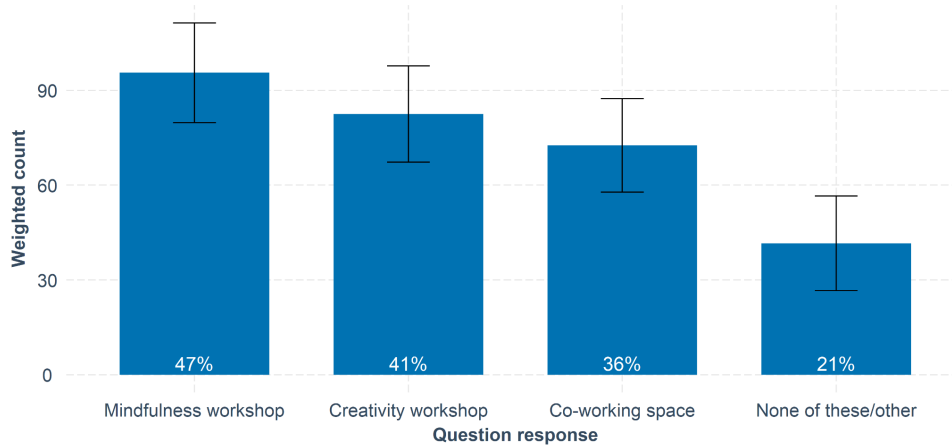
and an optional integration session (15 min).

C. Microdosing in a creativity workshop.

This would include a preparation session (15 min), a day (6 hours) of microdosing psilocybin and practicing an artistic skill like painting or sculpturing and an optional integration session (15 min).

D. Other - write in

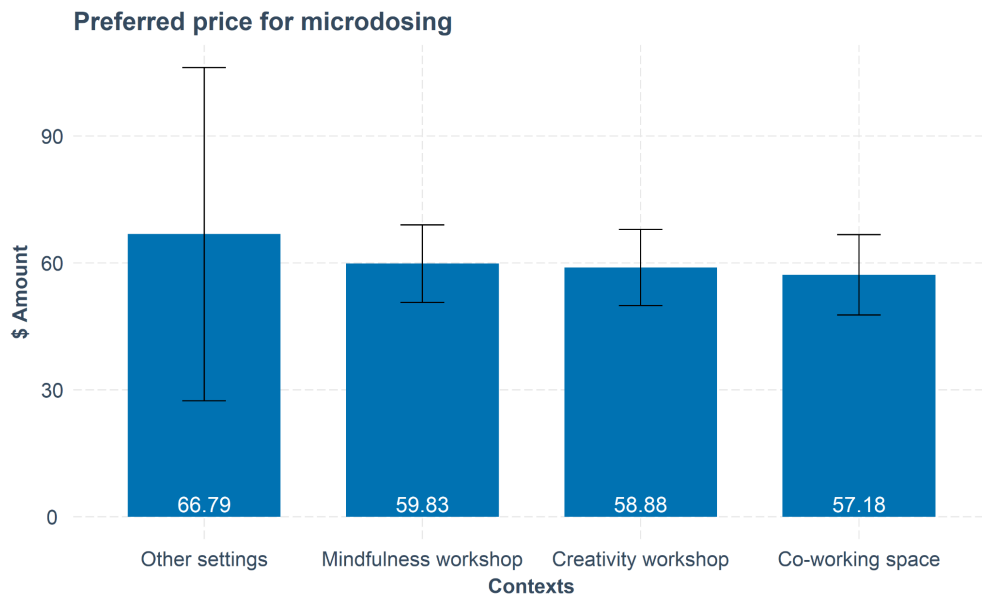
Which of these scenarios of administering microdoses of Psilocybin would interest you?



47% were interested in “Microdosing in a Mindfulness workshop”, 41% in “Microdosing in a creativity workshop”, 36% were interested in “Microdosing in a co-working session”, and 21% were interested in “none/other”.

Question 9

For each of the services of interest, what would be the price you would be happy to pay for this service? (Open ended question)

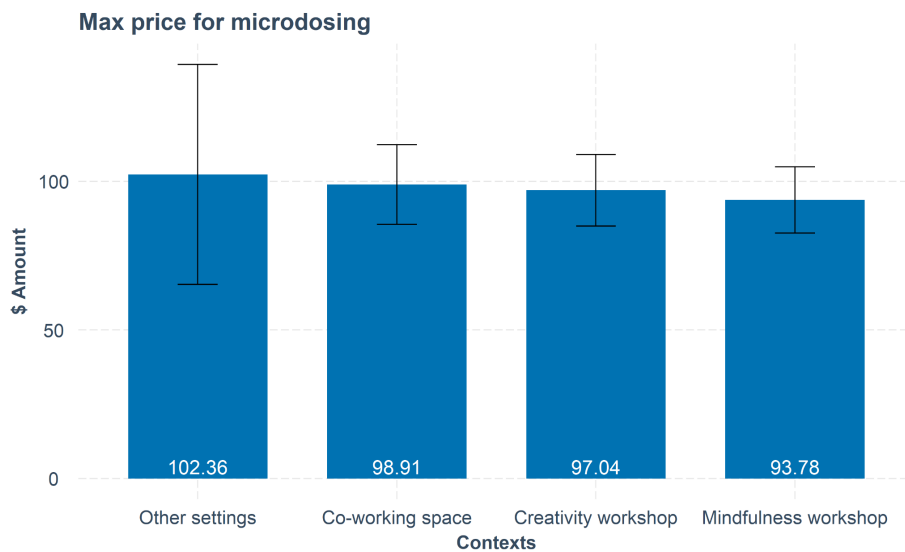


The preferred prices for microdosing were \$66 for “other”, \$59 for “mindfulness workshop”, \$58 for “creativity workshop”, \$57 for “co-working space”.

Question 10

For each of the services of interest, what would be the maximum price you would pay for a full day of this service? (multiple choice - need to find the choices)

- A. 50
- B. 100
- C. 150
- D. 200
- E. 250

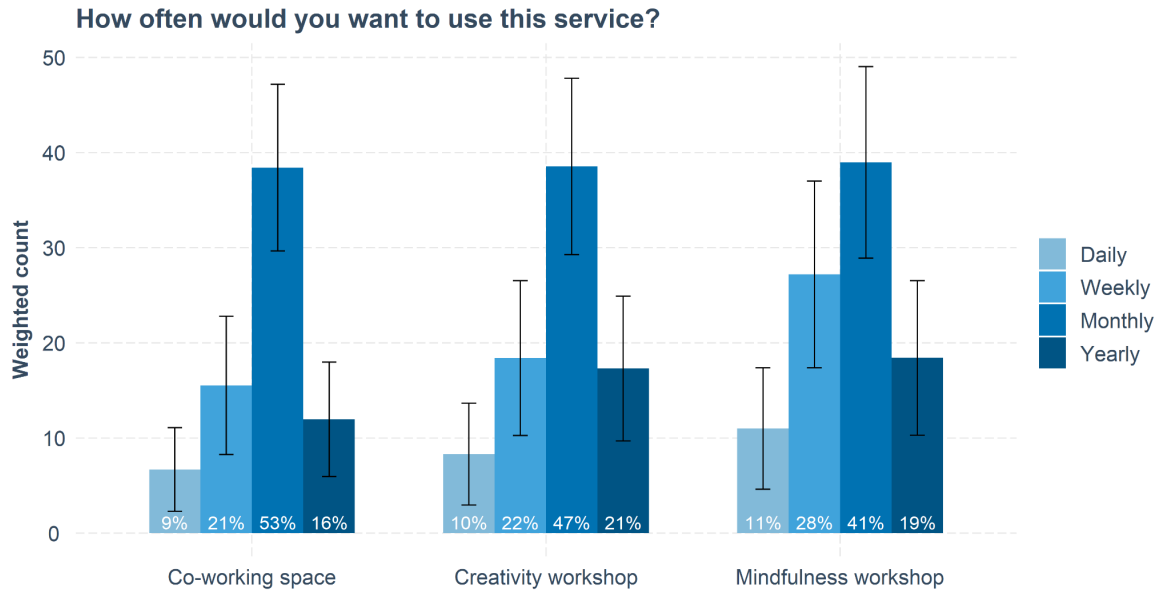


The max price was \$102 for other settings, \$98 for coworking space, \$97 for creativity workshop, \$98 for mindfulness workshop

Question 11:

For each of the interested services how often would you want to use this service?

- A. Daily
- B. Weekly
- C. Monthly
- D. Yearly

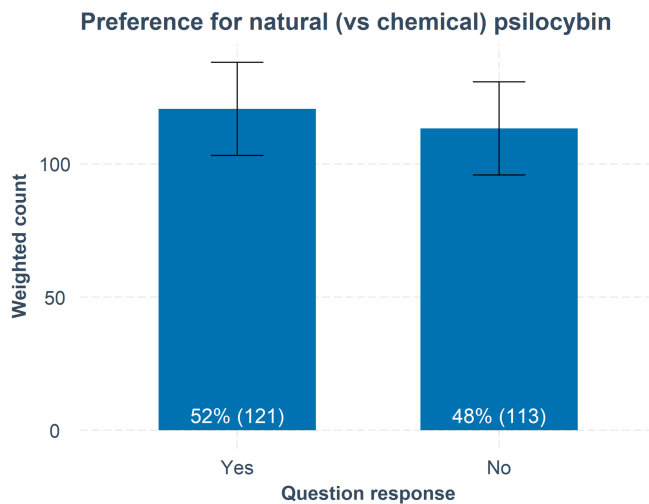


41% - 53% answered 'monthly', 21% - 28% answered 'weekly', 16% - 21% answered 'yearly', 9% - 11% answered 'daily'.

Question 12

Do you have a preference for natural psilocybin?

- A. Yes
- B. No

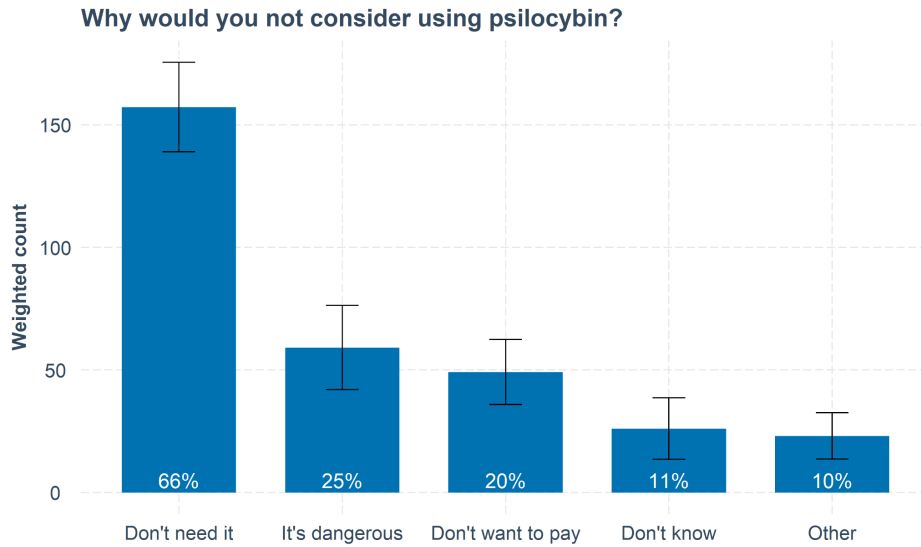


52% answered 'yes', 48% answered 'no'.

Question 13

Why would you not consider using Psilocybin? (can choose multiple)

- A. It's dangerous
- B. I don't need it
- C. I don't want to pay for legal services
- D. Other - write in

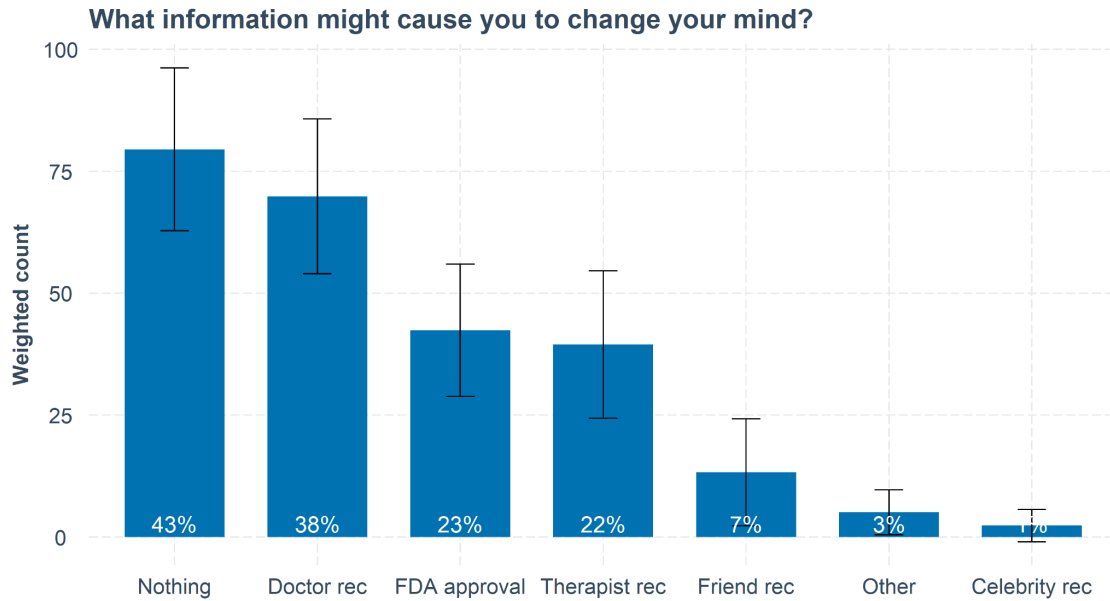


66% answered 'I don't need it', 25% answered 'it's dangerous', 20% answered 'don't want to pay', 11% answered 'I don't know', 10% answered 'other'.

Question 14

What type of information might cause you to change your mind? (multiple answers ok)

- A. A medical doctor I trust recommending it
- B. A therapist/mental health professional I trust recommending it
- C. A friend I trust recommending it
- D. FDA approving it for treatment
- E. A celebrity you admire recommending it
- F. Nothing will change my mind
- G. Other - write in



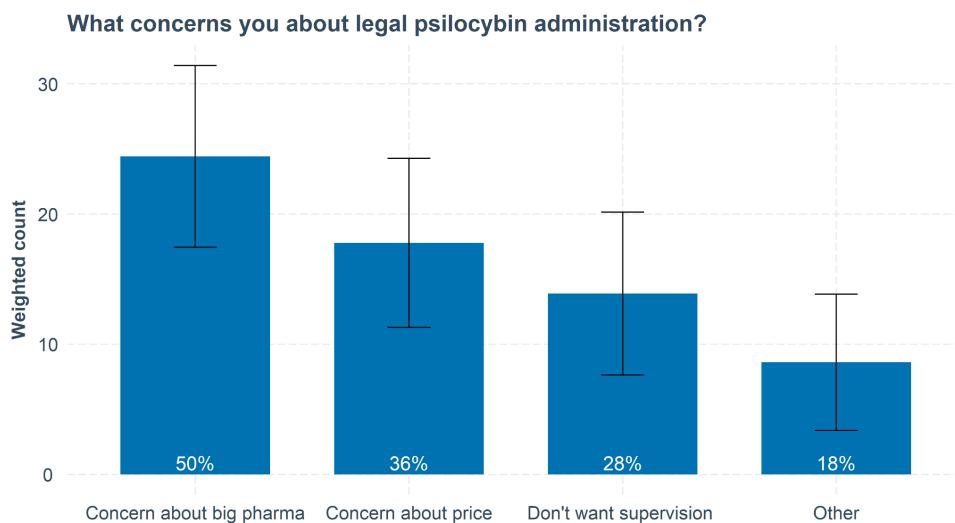
43% answered 'nothing', 38% answered 'doctor recommending it', 23% answered 'FDA approval', 22% answered 'therapist recommending it', 7% answered 'a friend recommending', 3% answered 'other', 1% answered 'a celebrity recommending it'.

Question 15

(if answered C "I don't want to pay for legal services" on question 12)

What concerns you about legal Psilocybin services?

- A. Their price
- B. The money for the services will support big pharma
- C. I don't want to be supervised in my use of Psilocybin
- D. Other - write-in



50% answered 'concerned about supporting big pharma', 36% answered 'concern about price', 28% answered 'they don't want to be supervised' and 18% answered 'other'.

Microdosing Safety

There have been concerns in the psychedelic community around the possibility of negative side effects of long-term microdosing Psilocybin due to activating the Serotonin 5ht2b receptor, which can cause health problems seen with people using the diet pill Fen-Phen. A literary review of academic research (a folder with all papers reviewed can be found [here](#)) uncovered that in order to get to a similar risk profile as Fen-Phen, which became significantly more dangerous at a daily dose of 60 mg one would need to consume at least 6 mg of Psilocybin on a daily basis. This dose is far beyond what is considered a microdosing dose which is 1-3 mg of Psilocybin. Currently, clinical trials are being done with a daily dose of 26 mg of fenfluramine, the substance in Fhen-Phen that was found to be dangerous at higher doses, which indicates FDA believes that a lower level of activation of 5ht2b receptor is safe.

It is also common practice to not microdose every day but use different protocols like once every 2 days, or 4 days microdosing in a row and then a break for 3 days. Most microdosing experts also take a few weeks break from microdosing every few months to check in on themselves which increases the safety profile of microdosing psilocybin.

Dosages

	Drug	Typical Starting Dosage (Daily)	Max Recommended Dosage (Daily)
1	Fenfluramine*	10 – 220 mg (Median = 60 mg)	60 mg (Less severe valvular heart disease)
2	Phentermine	15 – 60 mg (Median = 30 mg)	-
3	Psilocin	Microdosing 1-3 mg	-
4	Psilocybin	Microdosing 1-3 mg	-

Binding Affinity Values (K_i in nM)

For binding affinity, K_i values are presented in Table 2. All values are in nanomolar. For data points with multiple values available, Avg (n) represents an average of n K_i values.

Substance	5-HT2B
Fenfluramine	4,134.00
Nor-fenfluramine	Avg (2) 33.50
(+) Nor- fenfluramine	11.20
Phentermine	>10,000
Psilocin	4.60
Psilocybin	Avg(2) 349.35

Conclusions And Recommendations

Education & Equity

An increase in education aimed toward non-college graduates and females in Oregon will help improve equal access to information about the potential benefits of measure 109 as the research shows a significant lack of data in these demographic groups.

Products Equity & Safety

To increase accessibility and equity with psilocybin services it is important to offer services within the means of lower-income populations. Therefore we recommend:

- Allowing more clients per facilitator in a group session when using low doses of psilocybin as a safe way to lower the price of psilocybin services.
- Lower doses should be clarified in regulations to be no more than 3 mg of psilocybin.
- Lower dose session time should be clarified to be shorter than a full dose session.
- One intake session should be clarified to be enough for 6 months of lower dose service received up to 5 times a week.
- Tiered prices for lower-income clients should be encouraged.
- Including an internship component in facilitator training may decrease the prices of group sessions also for high dose services.

Future research and inquiry

We plan to conduct research in the Netherlands, where psilocybin is legal, to understand the optimal ratio for facilitators in a group setting with a dose of up to 3 mg of psilocybin per person as well as the optimal time for these low dose sessions.

Appendix - Statistical Analysis Details

Oregon demographic data was based on publicly available data from <https://data.census.gov/>. The exact quota chosen can be seen [here](#). 95% of the quota was filled accurately and the statistical correction was applied to prevent skewing by the 5%.