

For things on google doc, see
background research document on
google classroom, LogBook September
assignment. Date

Sep 6, 2024 CLASS + MEET, moved to next week

tasks:

- read and analyze Psychedelics (2016) for 35 minutes ✓
- update background research on docs after reading the aforementioned article [X] (40 mins)

September 10, 2024 CLASS + MEET

Things discussed during meet:

- Magic mushrooms: type of mushroom that produces hallucinogens to protect themselves ✓
 - project proposal will be put together towards the end of September
 - Next meet: end of September, tbd
 - Task: Finish background research reading by the end of September
- + Left early to see Ms. Sutherland

September 12, 2024 CLASS

Individual check-in:

- set daily guided reading goals
- set weekly meeting with Luis
- determine research question

Analyze Psychedelics (2016), complete 3 guided reading questions [X]
(google docs) ✓

September 16, 2024 CLASS

- Went over how to use paperpile
- Site right after mentioning the author
- learned how to learn citation with owl purdue

Research proposal

- ↳ study: no variable/hypothesis ✓
- ↳ experiment: variable/hypothesis
- ↳ innovation, No variable/hypothesis

- Research question(s), goals (short term + long term)
- Intro: lead to research question

Research paper Intro

Date

1. short summary of stats
2. specific types (couple paragraphs)
3. treatment
4. controversy/ lack of research

BE CONCISE!

Communication

- push push push! (respectfully)
- talk to Dr. Garcia
- just get started
- complete 3 guided reading questions ☒
(google docs)

September 18, 2024 CLASS

- finished guided reading questions ☒
(google docs)

September 20 CLASS

- emailed Luis:
 - He has a conference next week, no meeting. Will get back to me after
 - Mystical experience: point of subjective psychedelic experience, associated w/ sense of euphoria. (abstract concept)
 - party setting → recreational use of psychedelics
 - priming = exposure to stimulus. ∴ sub prompt refers to a sub context triggered ensues from priming
 - ego-dissolution: "losing" sense of self. Can be positive or negative.
 - positive: feeling sense of unity
 - negative: feeling detached

where is
this info
from?
Source

September 24 CLASS

Weekly check in:

- start writing introduction that leads to research question
- present intro to Luis during next meet and make edits

September 26 CLASS

- Add more details to guided reading questions on doc

Page

October

R.P = research proposal

2024

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1 Class • determine an approximate R.A. email Luis to ask him to review it	2 Class • determine goals	3	4 Class • Finish research question • individual work up • meet with Luis ✓	5
	7	8 Class • RP intro: 1 paragraph on history of psychobiology	9	10 class • 1 paragraph: etiology of psychobiology • 1 paragraph: types of psychobiology	11	12
13	14	15 class • edit rp • write long term goals	16	17 class • 1 paragraph: bioception • 1 paragraph: current field of knowledge	18	19
20	21 Class • 1 paragraph on why research is needed	22	23 class • finish methodology • finish objectives • finish variables • finish hypothesis	24	25 class • read over and edit RP	26
27	28	29 class • re-write methodology	30	31 class • turn in RP		

When are you writing R.A

Oct 2, 2024 CLASS

- emphasized logbook expectations
 - schedules need to be more specific ✓
 - always add source of information
 - each today's activity should be 90 mins worth of work
 - add the time it takes to complete each task
- mentor evaluation: how to get a better mark?
 - respond to email faster
 - be organized

* Find out my research question

Goals:

Short-term, long term

hour

First draft - mid October

— where's this draft? ✓

mins

Check with mentor: R.Q., data, goals

Intro → RQ → goals → methods → Variables → Significance ✓

- talk abt significance in intro

Significance

- be specific in contribution
- how does it contribute to the field? ✓

check w/ dr. Garcia: citation style in R.P. ✓

Write + cite along the way

DON'T PROCRASTINATE

End of week tasks:

1. determine research question
2. determine hypothesis

5 min

Possible R.Q. ?

* ~~What~~ How does the setting affect the effects of psychedelics

10 min

• Emailed Luis to:

- show him my R.Q.

- ask if there is a specific R.Q. he wanted me

- try to schedule next meet ✓

5 min

• update/add details to Oct calendar

Week of October

Date

Oct 4, 2024 CLASS

30 mins

More about logbooks:

- background research, dates, paper title, notes
- more detail is always better
- ask Dr. Garcia to check before turning in logbook
- went over suggestions for notion and google docs logbook

5 mins

Set long term goals (goals for this month)

5 mins

15 mins

Rewrote entire October calendar after hearing advice from Dr. Garcia

10 mins

Prepare for meeting (get up zoom, check camera and mic), wait for mentor

Meeting (Luis) notes:

QA: How do motivations and expectations for participating in a psilocybin-assisted psychotherapy trial for alcohol use disorder relate to treatment outcomes

15 mins

Project part 1:

General overview: past knowledge, current knowledge, how the research question is significant. Evidence on why answering research question is useful

Project part 2:

Exploring the relationship (correlation) between motivations and changes in drinking habits

15 min

Free drill

Oct 8, 2024 CLASS

30 mins

Make long range plan

End of February: finish analysis

talk with mentor

Poster should take 7-10 days

Portal close Mar 28

Citation with paperpile: in-text citations when writing

↳ trouble shoot

mins

Finish history of psychedelics paragraph

Where's this?

Page

Oct 10, 2024 CLASS

90 mins

- ☒ 1 paragraph on effects of psychedelics
- ☒ 1 paragraph specific types of psychedelics

> where can I find these?

these two paragraphs are combined into 1

Oct 15, 2024 CLASS

oral presentation

25 mins

- check rubric
- around 10-15 slides
- talk for 10 mins, longer is not better
- be sure to participate, ask questions about presentations

in-text citation should match with reference list

65 mins

- ☒ edit RP

Oct 17, 2024 CLASS

20 mins

- Basic project info → get done ASAP
- ethics + risks

70 mins

- ☒ finish 1 paragraph on psilocybin
- ☒ 1 paragraph about current field of knowledge

?? where's this?

Oct 21, 2024 CLASS

oral presentation

90 mins

- 10 min talk, 5 min qs

1 - BG 2 - RQ 3 - goals 3.5 - hypothesis 4 - methodology
5 - significance

- BG should be understood the most

- include relevant graphics

- don't be robotic, don't be rehearsed

- good flow, edit yourself

- long title - next slide explain title slide

- slide 1/2 = punchline

3~4 slides BG, 1 slide RQ and goals, 3 slides

variables, hypothesis, methods, 1 slide significance

AT HOME: ☒ finish 1 paragraph on why research is needed

Nov 8 2024 CLASS

Date

Meeting notes (with Luis)

40 mins
↓
The actual meeting was 20 mins. Luis was 20 mins late

- will send me a data sheet to clean, will provide basic instructions
- data sheet recorded patient's response to the questionnaire
- set up a weekly meeting: every Monday at lunch (11:35 am)
- meet next Thursday at lunch
- invited me for a lab meeting on Nov 26
- the lab meeting will be about the science behind this project

5 mins → waited for Coco to finish ✓

20 mins Did my oral presentation + answered questions

General comments from Dr. Garcia:

- good punch line
- maybe tone it down a little
- be prepared to answer questions about accuracy and bias

10 mins went to washroom, wrote down today's logbook entry 😊

Nov 13 2024 CLASS

lecture from Dr. Garcia:

- Read more about the background research of project
- format citation in paperpile
- look at in-text citation and reference list to see if they are correct
- need good presentation ability and knowledge about field of research
- when in doubt, ask
- don't slack off when Mr. Rose is subbing
- Not a lot of one on one check-ins
- adult supervisor - Dr. Garcia Scientific supervisor - mentor
- make sure CYSE portal is all green

5 mins

Isolated data in NinaProject - DATA_2024-11-12_CLEANNED1.xlsx

→ see Google classroom submission

Page

Nov 14 - Meeting with Luis at lunch

Meeting notes:

is this
on google
classroom

- make a separate spreadsheet to interpret the data ✓
- Lab meet will be on the 26th at 2:45pm
↳ relatively short one
- We can only collect drinking data by asking the participants because it is the standard form of research set by the USA federal drug association

Nov 15 2024 CLASS

- interpreted data in "motivation" folder

↳ Is there a link in
google class?

Nov 19 2024 CLASS

30 mins

- interpret data to separate worksheet → GC?
- ↳ genders of participants

- Lecture from Dr. Garcia

- APA: organized alphabetically
- AMA: order the reference appears
- Do more reading to prepare for Science Fair ✓

40 mins

- Be in charge of the project ✓
- Need to know the plan for December
- Create goals and how long it's going to take
- When in the "crunch" → get organized
- Communicate if don't understand
- Show Dr. Garcia things like the oral presentation ✓
↳ follow up on feedbacks
- Plan things out before hand

10 mins

- CYSF portal ✓
- complete declaration
- checking to see who's ethics is approved?

10 mins

Plans for Monday meeting: talk about plan for December
ask about location of lab meet, email him today, show him
the interpreted data

Nov 21 2024 CLASS

- Dr. Garcia absent
- interpreted motivation part of the excel sheet (GC?)

Nov 25 2024 CLASS

- Read "The Therapeutic potential of Psilocybin" see google classroom

Nov 25 MEETING with Luis

- plan for next month.
 - double check data interpreted
 - create figures from all data
 - decide which figures will be in final report
 - create an analysis pipeline

Nov 26 - LAB MEET !!!

Rolling observation assessment of MDMA assisted psychotherapy (ROMP)

- do people actually get better from these treatments?
- endocannabinoid systems (EBS) → large role in regulating stress and social interaction

↳ seen in animals and autism

neuroimaging in psychiatry:

- techniques to measure the structure or function of brain
- used in both clinical settings and research
- have many different methods + pros/cons

How it works:

- hydrogen has one proton when in the human body, creates electrical dipole. has magnetic charge
- looks at brain function
- if using a part of brain, needs energy. oxygen will rush to that part of the brain, oxygenated blood looks different from deoxygenated blood
- measure amount of glutamate and GABA (?) in cortex → important in cognitive flexibility

December 2024

background reading article: Microdosing
Psychodels: Motivations, subjective
effects and harm reduction

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Meet Luis at lunch	3 - Class disturbed due to president's breakfast	4 - Class 5 - create demographic figures	5 - Class 6 - finalize which figures to present - background reading	6	7
8	9 - Class 9 - Create motivation figures	10 - Class 11 - meet with Luis - choose which figures to present	11 - Class 12 - calculate standard deviation and correlation - background reading	12	13	14
15	16 - Meet with Luis at lunch	17 - Class 18 - create dot plot motivation vs drink had	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

How many of these tasks have a

Dec 2, 2024 - MEET WITH LUIS

- Luis sent me his master's degree paper for figure reference
- He will be taking winter break, no meetings
- download a graphing software for correlation graphs

Dec 5, 2024 (President's breakfast, class disturbed)

35min (Intro section FP → due Jan 31)

- Start looking now
- Use RP suggestions/intro
- watch flow/ depth of writing

Methods section of FP → due Feb 19

- technical and thorough
- take notes from mentor
- watch language → if talking abt equipment, describe equipment
- past/ present perfect
- No personal pronouns

OP - Feb, think abt posters

- fully understand project
- check in w/ Dr. Garcia

Future meetings:

- 5-10 min talk abt calendar, deadlines

Dec 9, 2024 - CLASS

- Some patients dropped out/ didn't finish treatment
- narrowed down patients to number 2, 10, 3, 6, 5, 7, 4
- made demographics figure, and calculated standard deviation of age (Where are these?)

Dec 11 CLASS + MEET

Meet notes: (meet w Luis?)

- Next month start correlation graphs, select for science fair
- Checked over my demographic figure → looks good
- interpret timeline flow back date

- Updated logbook and sent meeting summary email

Dec 15 CLASS

- finalized which figure to use → where are they?
- double checked values
- updated Luis on my progress (by email? - or meeting?)
- updated logbook
- Did background reading - what paper (where are notes?)

Dec 17, 2024 CLASS

- Read over survey questions and MRAC questions to better understand study, studied responses in rough data sheet

Dec 19, 2024 CLASS

- emailed Luis to ask for correlation data
- Background reading

What papers?
Notes?

↓
where
is this
work?

Sun	Mon	Tue	January Wed	2025 Thur	Fri	Sat
5	6	7	1	2	3	4
12	13	14	8	9	10	11
19	20	21	15	16	17	18
26	27	28	22 CLASS • background reading • email Luis again, over for doctor (since Dec 14th?)	23 22 CLASS • background reading • email Luis again, over for doctor (since Dec 14th?) be specific	24 CLASS • background reading	25
			29 28 CLASS • email Luis again! • background reading	30 CLASS • Meet w/ Luis • learn how to create curriculum groups	31	

If you repeat the same task 3 times how can you progress?

Date

No tasks related to your intro paper!

due Jan 30th

So now you're in need of an extension

Feb 3

- Every second of the class has to be used
- Contact with mentor
- Use chatGPT to find sources, it's a good research tool
- Started introduction paper [Nina Tian - Introduction Section Paper](#)

Feb 5

- Make small goals: knows when behind
- Calendar needs to be more specific
- Continued to work on introduction paper [Nina Tian - Introduction Section Paper](#)
- Worked on presentation slides 1-7 [Oral presentation Feb 25](#)

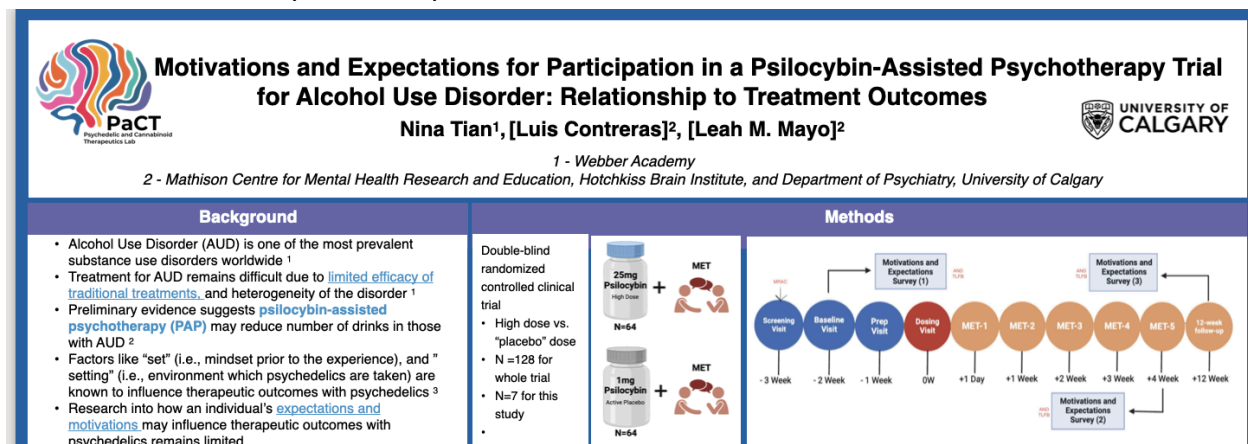
Feb 7

- Not many people have asked for the tri-fold, plan it
- Marks lock on 28th
 - Option 1: move everything one class forward
 - Option 2: everything will be more fast paced -speed dating
 - Option 3: push back
- Have to tell teachers within a week that I will be missing class for science fair
- Any stuff missing from class, do it earlier
- Don't let judges wait for you at your poster

Individual checkup:

- Just do online logbook
- Scan notebook and transfer online
- Make all background reading in one doc
- Too little sources, depth questionable
- For science fair and final paper: increase number of sources read/cited
- For some papers, only read abstract and conclusion
- Psychedelics in general:
 - Mode of action
 - Expand
 - Answer better questions, more general questions that are not directly related to my topic
 - Types of uses in clinic could be different
 - Assisted therapy with psychedelics
 - Similar addictions, similar psychedelics
 - Other treatments compared to psychedelics
 - Methods
 - Very simple
 - Make it more significant with mode of action
 - Poster
 - Email:
 - If they have poster template
 - How many graphs, how many tables

Work done: formatted part of the poster



Worked on oral presentation slides 8-14 📅 Oral presentation Feb 25

Feb 13

- Everybody in a study will have a problem section, have a have a little bit of background
- Show how YOU are driving the project with the support of your mentor
- Originality!!! (how to prove it is my interest)
- Use the rubrics from the city science fair
- CYSF portal (just do it)
- Acknowledgements
 - University and department
 - Name of the person from the department blah blah blah, university of blah blah blah
 - Don't make a big paragraph of anything else
 - Can acknowledge a person who gave you feedback
- COMMUNICATION!!! When is it time to yell?
- Sometimes, you have to suck it up

Work done: methodology paper 📄 methodology

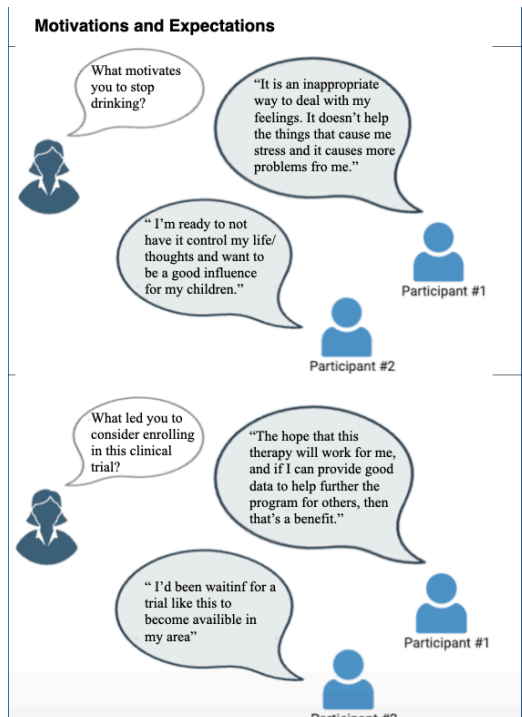
Feb 19

- Separate results and discussion.
- Include a figure title, description (brief), figure has to stand alone
- Format: detailed description, reference the figure, figure, fig num, fig title, description briefly
- Never say the figure above/below, just say the figure number
- Analysis/discussion and conclusion due May 1st
 - explain/provide alternative explanation
 - Put your results in the context of the current understand of the field of studies
 - Get back to RQ
 - support/reject hypothesis
- Plan your things, sometimes we are not that smart

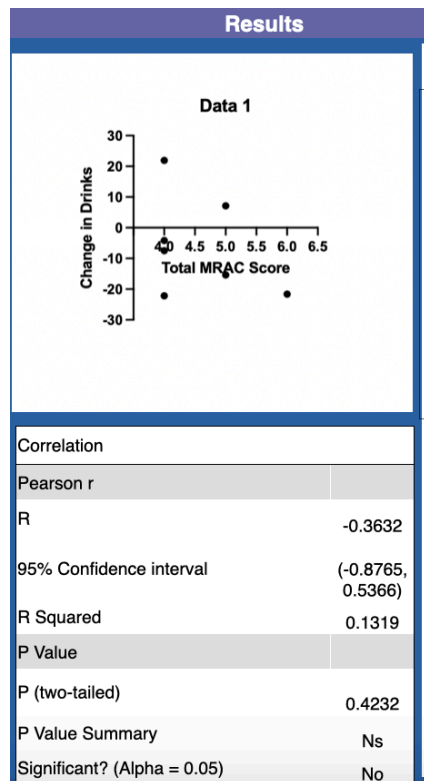
Work done:

Worked on the following sections of online poster planning:

Made a visual presentation of quotes.



Made a visual presentation of results (Pearson r correlation graph, P value calculation)



Wrote discussion of results

Discussion

- Weak negative correlation between the total MRAC score and the change in drinks
- Since the confidence interval includes zero, it suggests that it is not statistically significant
- R squared is only 0.1319, meaning the majority of the variation is due to other factors
- The sample size is quite small, which reduces the reliability of the statistical results
- Increase sample size will decrease sampling variation, and provide a more accurate estimate of the true correlation

Feb 25

Maddux and Merrit

Pots: autonomic disorder, increase heart rate when patients stand up

Problem: unknown cause for the problem

Lower body negative pressure: vacuum, sucks the air out, follows the principles of fluid dynamics

Is everything else normal with the patient except for the blood pressure?

Arth

Menopause: end of female reproductive stage

Estrogen: protects muscles from declining

Menopause results are caused by estrogen deficiency

Measuring the immediate effects

Results data: scatter plot

Increase in physical activity leads to increase in oxygen concentration in the blood

Antara

If the ratio of isopropyl alcohol to water in the catalyst ink solvent is increased, then the size of the aggregates in the catalyst ink will decrease, leading to improved catalyst layer

When a laser is directed at the ink, the particles spread light, find the transnational diffusion coefficient

Water content affects particle size, pore structure, and conductivity.

- Non linear trends

High conductivity and improved ion mobility to have a good catalyst layer

What is autocorrelation?

Eleanor

El nino: has teleconnections or significant relationship between weather phenomena at widely separated locations

Proxy records sensitive to temperature/rainfall patterns that extend to the 18th century.

Focus of societies are different between india and peru

Trying to reconstruct the 18th century el nino

India and Peru: most affected by el nino

March

Su n	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3 CLASS Remodel poster and send to Dr Garcia, practice presenting for science fair	4	5 CLASS Get started on results paper, finalize online poster look, align things perfectly, make sure poster looks nice	6	7 CLASS Have the poster printed and bring it to class to show Dr. Garcia, practice presenting with poster	8
9	10	11 School science fair!	12	13 CLASS Fill in introduction and methods section of CYSF portal	14	15
16	17 CLASS Finish results paper, fill in citations and acknowledgement part of CYSF portal	18	19 CLASS Reconstruct parts of the results paper after adding data	20	21 CLASS CYSF portal due Finish the reconstructed parts of the results paper	22 Spring break
23	24	25	26	27	28	29
30	31					