Proposed research questions:

Here are the main research questions we are investigating in this study:

1. What is the relationship between mental or physical health and the use of mind-altering substances in software working environments?
2. What are the perceptions around substance use as "programming enhancement" vs. substance use as "medicinal symptom relief" in software workplaces?
   a. Are certain substances more stigmatized than others?
   b. How is substance use affecting individuals anecdotally and the workplace culture as a whole?
3. How does substance use impact social aspects of software working environments, both for in-person and remote work?
   a. Do developers who use mind-altering substances feel comfortable disclosing or discussing their use (either medicinal or recreational) in software working environments? Why or why not?
   b. How would developers view coworkers if they used various mind-altering substances for work-related tasks? We are interested in substances including cannabis, stimulants, opiates, antidepressants, alcohol, and psychedelics (microdosing being especially curious).
4. What are the use and self-regulation patterns developers follow when using mind-altering substances for completing software engineering tasks?

Proposed interview questions:

The interviews will be semi-structured, but will cover the following overall topics. Under each topic, we have included example interview questions that will start the discussion.

Basic/interview-intro questions

- What is your job like? What does a typical day at work look like for you?
- What software tasks do you usually do? Which are most prevalent/important to your work?
- How many years of experience do you have working in a professional setting with software?
- What is the culture of your workplace like? Do you get along with your coworkers, and to what degree?

Clarifying language

- What does the term "mind-altering/psychoactive substances" connote to you?
- What kind of substances do and don't you consider to be "mind-altering?"
  - Does the status of prescription influence your opinion on this?
  - Does the amount of a substance influence your opinion on this?
- Would you call something more normalized for use in daily society, such as caffeine or ibuprofen, a mind-altering substance?

Working definition of what we define "mind-altering" substance to be, with examples: Any drug or substance that, when ingested by a user in some form, has effects perceptible to the user or others on the user's cognition or behavior. Examples include pharmaceuticals (SSRIs like Zoloft/sertraline, Prozac/fluoxetine, stimulants like Adderall, Vyvanse), recreational drugs (marijuana, alcohol, cocaine, nicotine), psychedelics (LSD, psilocybin), or others. We do not define "mind-altering" to encompass supplements that have more of a secondary or small effect on cognition, like ibuprofen, multivitamins, or caffeine.

Basic Experience
- What mind-altering substances do you use while doing software work, if any?
- Why do you use substances while doing software work?
- Can you tell us in detail about a time when taking a substance [impeded/helped] your progress when working on a software task? (Choose between the words depending on their sentiment in the previous question.)
- For each substance you have used while completing software tasks, how much of that substance do you typically use and how do you typically ingest it?
- Compared to an "un-altered" mind state, how big are the effects you've mentioned on aspects of your workflow?

Mental/physical health
- Does work cause you undue stress? Do you try to alleviate this using mind-altering substances?
- Does work cause you physical pain? Do you try to alleviate this using mind-altering substances?
- Do you use mind-altering substances at work to alleviate physical or mental symptoms brought on by things outside of work?
- Is it uncomfortable to work without using psychoactive substances? – maybe doesn't catch addiction out of context
    - How often do you use mind-altering substances while at work or doing work-related activities?
    - Do you find yourself using mind-altering substances when you didn't intend to previously?

Enhancement vs. alleviation
- Do you use mind-altering substances to improve your quality of life, to enhance your work, or something else?
- Are there certain situations where you would not use mind-altering substances in order to get a better result? What effects/substances are beneficial for which programming activities?
    - Show them / put in the chat a list of different software engineering activities

        Brainstorming

        Architectural Design

        Data Analysis

        Detailed Program Design

        Quality Assurance

        Reading or Writing Documentation

        Requirements Elicitation

        Scripting

        Software Coding and Testing

        System Integration
    -

Types of mind-altering substances: (ask for ingestion method and subtype of drug)
Medications that are prescribed for mental health:
- Antidepressants
- Anti-anxiety
- Antipsychotic

- Mood stabilizers
- Stimulant medications

- Do you take any mind-altering prescription medications?
  - If so, how do they affect your experience at work?
  - How do they affect your interactions with other developers?
- If you use them while programming, do you use mind-altering substances to improve programming? To improve your experience while making software?
- Have you or someone you know ever microdosed while coding?

Self-regulation
- How often do you use mind-altering substances while programming? How often do you use them at work?
- If you used to use mind-altering substances while at work or while programming and don't anymore, why did you stop?

Social impacts
- Have you seen or heard of others using mind-altering substances at your workplace?
  - How do you feel it affected people's work or your interactions with them?
  - How do you feel it affected the workplace as a whole?
- Do you keep usage of mind-altering substances private for fear of social or financial repercussions at work?
- Do others at your workplace (boss, co-workers) know that you use SUBSTANCE while completing software tasks?
- If you take prescribed medication, do you reveal this information to anyone at work? If you do, how has revealing this information affected you and others around you?
- Would a company drug policy impact your decision to apply or work at a company?

Open Ended Questions
- Can you think of a specific example? Can you go into more detail on that example? etc.
- Can you elaborate on what you meant by that?
- If someone's fumbling for words: Reword what they just said and ask if it sounds accurate. So if that's true, what's [related thing] like with regards to that?
- Use "what, how, why" principles. If one is missing in an anecdote or sentiment, ask for it.
- What were the positives and negatives of that experience?

Proposed interview flow:

- The beginning of the interview will follow the script below. This script contains a reaffirmation of consent, information about the study, and reaffirmation of consent to be recorded.
  - **Briefing**
  - Hi I'm _____. Thank you for joining us today.
  - Before we start, can you tell us what pronouns you use?

Thanks _____. We appreciate your voluntary help with this research study. We are interested in hearing about your experience in using or interacting with those who use psychoactive substances in a software engineering context.

Before we begin, let's take a look back at the consent form included in the interview sign up survey.

[Revisit the consent form and open for questions]
As a reminder, this interview will be recorded for internal purposes only. In addition, throughout the interview we will be taking notes. Your identity will remain confidential as mentioned in the consent form that was sent to you. We will also delete the audio recordings after we have made a text-based transcript. Other than your email address, no other personal information will be collected. Your email will only be used for the purposes of scheduling your interview. You are able to withdraw from the study at any point in time. Do you still consent to participation in this study?

If you get disconnected from the call, please use the same link included in the email invitation, join via phone, or email us if you need to reschedule.

Before we begin, do you have any questions for me?
Great. I'll begin the interview recording now.

[Start Recording]
Okay the recording has begun. So now we'll begin the interview
- Now we have the semi-structured interview using the topics and example interview questions above. We begin by asking questions in the "clarifying language" category.
- Once the interview is concluded, we will say the following script:
    Debriefing
    [Stop Recording]
    Thank you again for participating in today's study. If you know anyone who may be interested in participating as an interviewee, please have them contact us. Alternatively, you can provide us with their contact information and we will contact them.

    If you have any questions please don't hesitate to email me. If you think of any other comments that you forgot to mention during today let me know.