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# Dr. Seitchik's Al Research and Writing Companion: A Student's Handbook for Leveraging Technology

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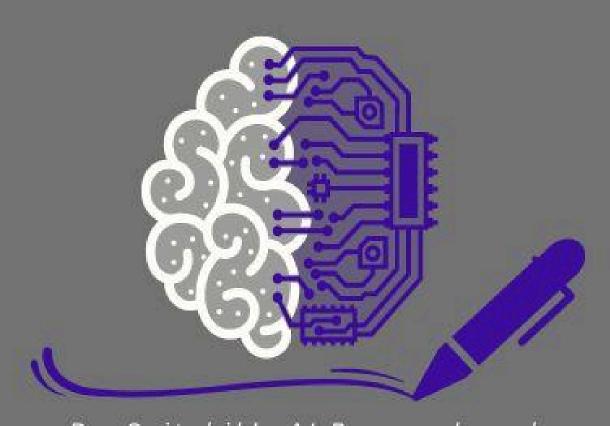
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Dr. Seitchik's Al Research and Writing Companion

Allison E. Seitchik, PhD

# Dr. Seitchik's Al Research and Writing Companion: A Student's Handbook for Leveraging Technology<sup>1</sup>

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This guide is intended to be utilized by students to help them use AI to assist in research and to scaffold their writing. Some screenshots have been redacted for copyright reasons. A paper using this guide is under review and a citation will be provided when available.

<sup>&</sup>lt;sup>1</sup> ChatGPT (2024) was used to assist in creating the title.

Before you skip anywhere using the linked agenda below, please understand that: <u>The most important thing</u> to note is that if you cannot validate Al's response and information yourself, you cannot use it. You <u>MUST validate and check every piece of information. In other words, if you cannot do the task yourself and check, don't ask Al to do it.</u>

#### **Overview**

STEP 1: Pick your topic and develop your research question

Tips for writing your prompts

What if I have no clue where to start?

STEP 2: Find research articles

STEP 3: Develop your intervention (if one is needed for your paper)

STEP 4: Read your articles and develop your study

STEP 5: Write your paper

# Overview

I know you have already been using AI (e.g., ChatGPT) for various things, even related to classes, and I'm not asking you to stop. However, I do want to teach you ways to use it properly and ways it can lead you really astray. The most important thing to note is that if you cannot validate AI's response and information yourself, you cannot use it. You MUST validate and check every piece of information. In other words, if you cannot do the task yourself and check, don't ask AI to do it. You also need to understand that AI, just like people, holds biases and can give false or one-sided answers. This is why validating responses is so important.

The two main ones that I go over in this guide that can be very helpful to you are <u>ChatGPT</u> and <u>Elicit</u>. Below are instructions for usage as well as warnings for what NOT TO DO. To avoid potential plagiarism, you need to check responses and put things into your own words. If you don't believe me, I will show you (plus, ChatGPT does not cite at all).

Speaking of citing, you also need to cite AI if you utilize it to help with your paper. You need to use in-text citations if you are taking things (e.g., your research question) directly from AI. Here is how you do so (NOTE: please change the year to the appropriate version when you utilized it):

- Reference: OpenAl (2023). ChatGPT (date of use version) [Large language model].
   <a href="https://chat.openai.com/chat">https://chat.openai.com/chat</a>
- In text parenthetical citation: (OpenAI, 2023) or OpenAI (2023)
- Reference: Ought (2023). Elicit: The Al Research Assistant. Retrieved (full date you used it) from https://elicit.com
- In text parenthetical citation: (Ought, 2023) or Ought (2023)

If you are using AI as a guide without citing it in text, then you need to make note of this at the end of your reference section. You can also have it in an acknowledgement section. You want to disclose and detail where you used AI. Here is an example:

•	Acknowledgement	s: I used ChatGPT a	nd Elicit. I used	ChatGPT for	and Elicit to find articles,
	such as	[insert citation here]	and	[insert citation here]	-

- OpenAl (2023). ChatGPT (date of use version) [Large language model]. https://chat.openai.com/chat
- Ought (2023). Elicit: The Al Research Assistant. Retrieved (full date you used it) from https://elicit.com

You SHOULD document EVERYTHING you do with Al! This will help you keep track of where things may have come from as well as gives you the ability to check responses in the future. Please keep a running google doc with all of the things you used Al for from start to finish. Your professors may ask you for these documents as well. I reference such a document and will call it your "Tracking Al document" throughout this guide to help you understand how and when to document things.

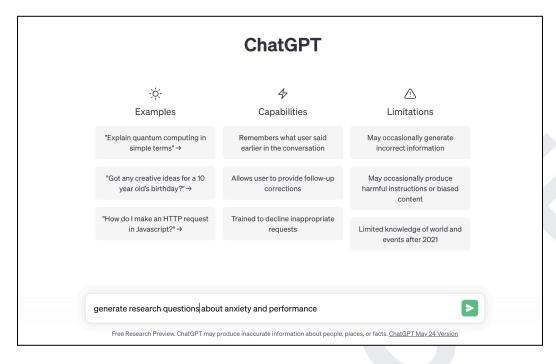
Both of these sources can be helpful for research papers. Most specifically, they can help you take a topic and develop a research question, find articles for your topic, summarize those articles even through an annotated bibliography, and assist in other aspects of your research paper too (e.g., grammar check). I will show you both and which is best for what if that is the case. *Please also note all of the warnings as you will plagiarize if you don't follow them*. This guide is broken down into the components of conducting and writing a research paper/proposal, starting with the first step. Again, I use ChatGPT but other platforms such as Bard/Gemini, work in a similar fashion.

For all of these steps, I'm using the topic of anxiety and performance.

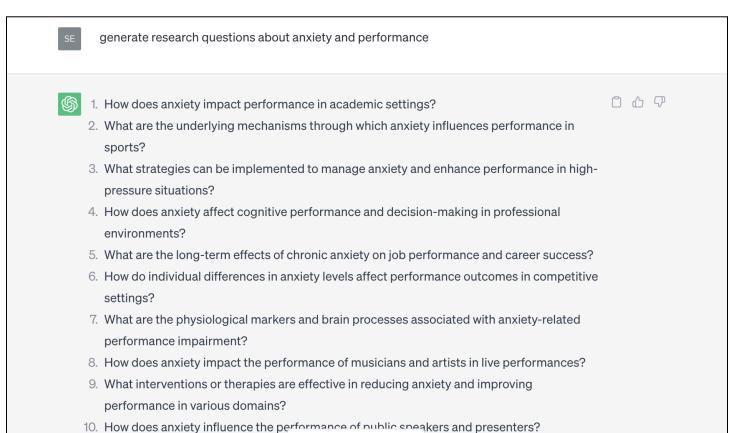
# STEP 1: Pick your topic and develop your research guestion

## Using **ChatGPT**

If you do not have a research question in mind, you can type in topics and ask it to generate a research question based on your topics of interest. Your prompt matters (see <u>tips below</u>). It will take it literally (i.e., it will give you one question if you say, "list a question about...").



Review the questions it generated and see if any stick out to you. If a few do, note them all down in your tracking Al document. If only one sticks out, just copy that into your tracking Al document. You can also copy ALL of them by clicking on the clipboard over in the top right corner of the response (next to the thumbs up and down). It will copy the entire response into your clipboard and just hit paste in your tracking Al document.



I'm going to pick #5 listed. I should note, if none of them appeal to you, you can ask it to "Regenerate response" (you can see it in above screenshot) and it will list different questions. You can then toggle back and forth between the responses (see the 2/2 with the arrows to the left of the screenshot below). They are not brand new, but alter them to be either more or less specific. You can see that #1 above is about anxiety impacting performance in academic settings and #1 below is more specific (cognitive performance).

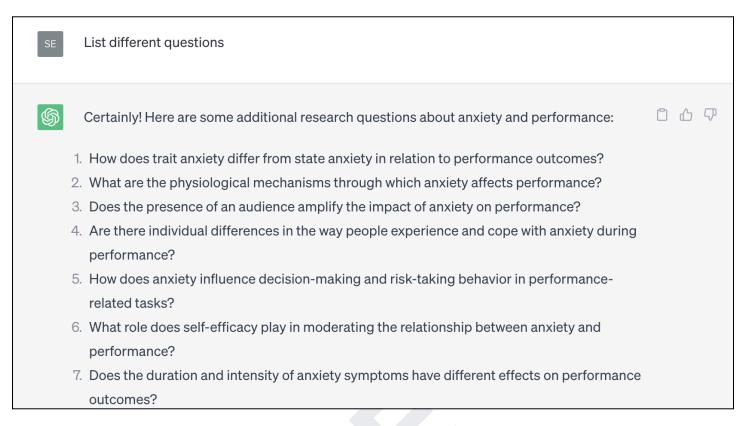
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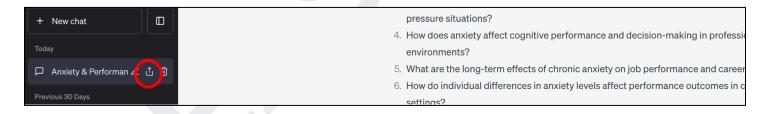
- 1. How does anxiety affect cognitive performance in academic settings?
- 2. What is the relationship between anxiety and athletic performance?

If none appeal to you again, you can ask it to "list different questions"...and it will.

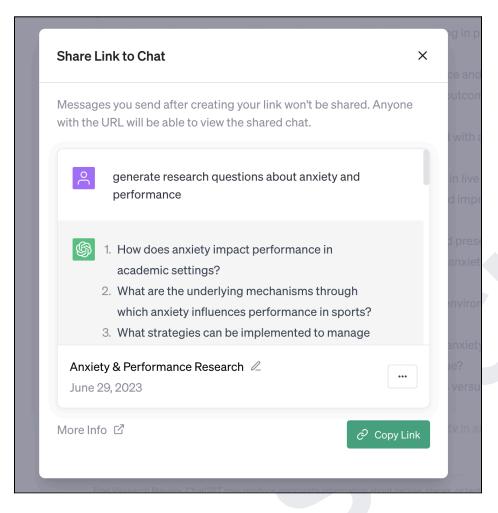
11. What is the role of self-efficacy in Regenerate response fects of anxiety on



You need to copy the question(s) of interest into your tracking Al document. You should also copy over the entire chat. It is very easy. Over on the left-hand side of the website, there are the chats you have conducted. This one should be at the top as it is the most recent.

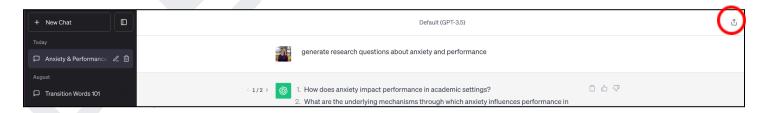


There are three dots depending on how large your screen is, with a "share" icon. Click on that. This screen pops up:



Click the green "copy link" button at the bottom and paste that link into the tracking AI document.

If that doesn't work, you can share the link at the top of the chat (NOT the website URL). To do this, scroll up to the top of the chat (i.e., your first prompt). You will see the share icon over on the right. You can see it all the way over on the right side, top corner below. The rest of the steps follow the same as above.



Next, you should use ChatGPT or head over to Elicit to find articles.

# Tips for writing your prompts

Using some AI platforms, like ChatGPT, is like having a conversation with a human being. There is back and forth between you and the platform and the more information you give the platform, the better it can respond. I did ask ChatGPT to give me some tips. Here they are:

Sure, here are some helpful tips for writing prompts in ChatGPT:

- 1. **Be Clear and Specific**: Clearly state what you want ChatGPT to do. Provide specific details and context to guide the response.
- 2. **Avoid Ambiguity**: Ambiguous prompts can lead to unclear or irrelevant responses. Ensure your prompt is straightforward and focused.
- 3. **Use Open-ended Questions**: Instead of yes/no questions, use open-ended questions to encourage detailed and creative responses.
- 4. **Provide Background Information**: If your prompt requires some background knowledge or context, provide it upfront. This helps ChatGPT understand the topic better.
- 5. **Specify Tone and Style**: Let ChatGPT know if you have a preferred tone or style for the response. Whether it's formal, informal, humorous, or technical, setting expectations helps.
- 6. **Include Examples (if needed)**: If you're asking for a specific type of content, providing examples can be helpful for ChatGPT to understand your expectations.
- 7. **Break Down Complex Ideas**: If your prompt involves complex concepts, break them down into simpler parts or questions to facilitate a more coherent response.
- 8. **Give Feedback**: If ChatGPT's response doesn't meet your expectations, provide constructive feedback. This helps improve future interactions.
- 9. **Stay Engaged**: ChatGPT can generate more relevant responses when you actively engage with the conversation and provide additional context or clarification as needed.
- 10. **Experiment and Iterate**: Don't be afraid to experiment with different prompts and approaches. Iterate based on the responses you receive to refine your prompts over time.



You can also ask ChatGPT to give you poorly constructed research questions or ideas and then ask how to make it better.



#### You

Can you give me an example of a poorly constructed research question on anxiety and performance and a few ways to make it better?

### 

Sure, here's an example of a poorly constructed research question on anxiety and performance:

Poorly Constructed Research Question:

"Does anxiety affect performance?"

This research question is overly broad and lacks specificity. It does not provide clear guidance on what aspects of performance or types of anxiety are being examined. Additionally, it does not indicate the context in which performance is being measured. Here are a few ways to improve this research question:

1. Specify the Type of Anxiety:

Improved Version: "How does chronic anxiety, specifically generalized anxiety disorder (GAD), impact cognitive performance in academic settings?"

2. Specify the Type of Performance:

Improved Version: "What is the relationship between test anxiety and academic performance among undergraduate students in STEM disciplines?"

3. Provide Context or Setting:

#### 3. Provide Context or Setting:

Improved Version: "How does social anxiety influence public speaking performance in college students during class presentations?"

4. Include Specific Variables:

Improved Version: "To what extent does trait anxiety, measured using the State-Trait Anxiety Inventory (STAI), predict job performance ratings among sales professionals in a competitive industry?"

By incorporating these improvements, the research questions become more focused, specific, and actionable. They provide clarity on the variables being examined, the population of interest, and the context in which performance is assessed, which can lead to more meaningful and informative research outcomes.

You can give it context to better help it understand what you need or want. In this case, tell it exactly what you are using the research question for.



#### You

I'm a senior in college and am writing a research paper about anxiety and performance. I have to then develop an intervention to lessen anxiety and help performance. Give me some research questions on this topic for my paper.

# 

Absolutely! Here are some research questions that you can explore in your paper on anxiety and performance, along with potential intervention strategies:

- 1. Research Question: How does mindfulness-based stress reduction (MBSR) impact anxiety levels and academic performance among college seniors? Intervention: Implement a 6-week MBSR program for college seniors and assess changes in anxiety levels, academic performance, and related outcomes such as self-efficacy and well-being.
- 2. Research Question: What are the effects of cognitive-behavioral therapy (CBT) on reducing test anxiety and improving test performance among college students? Intervention: Offer individual or group-based CBT sessions targeting cognitive distortions and maladaptive beliefs related to test-taking, and evaluate changes in test anxiety levels and academic performance.
- 3. Research Question: How does exercise intervention affect anxiety levels and job performance among college seniors preparing for graduation and entering the workforce? Intervention: Design a 12-week exercise program tailored to college seniors, and assess changes in anxiety levels, job search self-efficacy, and job performance-related outcomes such as interview performance and employment status.

4. Research Question: Can a virtual reality (VR) exposure therapy intervention reduce social anxiety and improve public speaking performance among college students? Intervention: Develop a VR-based exposure therapy program to simulate public speaking scenarios, and measure changes in social anxiety levels, public speaking performance, and related outcomes such as self-confidence and communication skills.

5. Research Question: What is the impact of a time management and stress reduction workshop on anxiety levels and academic performance among college seniors? Intervention: Conduct a one-day workshop focusing on time management techniques, stress reduction strategies, and study skills training, and assess changes in anxiety levels, academic performance, and perceived stress levels.

These research questions can serve as a starting point for your paper and provide a framework for designing and implementing an intervention study to address anxiety and improve performance among college seniors. Consider selecting a research question that aligns with your interests, resources, and the feasibility of implementing the intervention within your academic context.



I can give more specific information about the class.



#### You

I'm a senior in college and am writing a research paper for a psychology class about anxiety and performance. I have to then develop an intervention to lessen anxiety and help performance. Give me some research questions on this topic for my paper.





#### ChatGPT

Certainly! Here are some research questions you could consider exploring in your psychology research paper on anxiety and performance, along with potential intervention strategies:

- 1. Research Question: How does mindfulness-based stress reduction (MBSR) impact test anxiety and academic performance among college students? Intervention: Implement an MBSR program tailored to college students, incorporating mindfulness meditation, breathing exercises, and cognitive reframing techniques. Assess changes in test anxiety levels, academic performance, and related outcomes such as self-efficacy and concentration.
- 2. Research Question: What are the effects of cognitive-behavioral therapy (CBT) on reducing performance anxiety and enhancing public speaking skills among college students? Intervention: Offer individual or group-based CBT sessions targeting cognitive distortions and negative beliefs related to public speaking. Use exposure therapy techniques to gradually desensitize students to speaking in front of others. Measure changes in performance anxiety levels, public speaking skills, and self-confidence.

It does not change the questions too much but the above contains more psychological questions and interventions. You can see this more clearly if I change the class to something like exercise science.



#### You

I'm a senior in college and am writing a research paper for an exercise science class about anxiety and performance. I have to then develop an intervention to lessen anxiety and help performance. Give me some research questions on this topic for my paper.

#### 

Certainly! Here are some research questions you could explore in your exercise science research paper on anxiety and performance, along with potential intervention strategies:

- 1. Research Question: How does a structured exercise program impact anxiety levels and athletic performance among collegiate athletes? Intervention: Implement a 12-week structured exercise program tailored to collegiate athletes, incorporating a combination of aerobic, resistance, and flexibility training. Assess changes in anxiety levels, athletic performance (e.g., strength, speed, endurance), and psychological well-being.
- 2. Research Question: What are the effects of pre-competition relaxation techniques on reducing competitive anxiety and enhancing performance in collegiate athletes? Intervention: Offer pre-competition relaxation sessions where athletes engage in deep breathing exercises, progressive muscle relaxation, and visualization techniques. Evaluate changes in competitive anxiety levels, performance outcomes (e.g., game statistics, scoring), and subjective perceptions of readiness.

Yes, they have some psychological aspects as anxiety is psychological as well as physical. But they are different from the two previous responses. CONTEXT matters and it can help you.

# What if I have no clue where to start?

It is 100% okay to not know where to start with a topic. Maybe you're not sure what you are interested in. Maybe you do not have a huge preference for a topic. Again, that is fine. It took me days to finalize my senior thesis question. It happens. ChatGPT can help you figure out where you might want to start. Essentially, you will have a different kind of conversation. It's called a flipped interaction. Instead of you asking ChatGPT questions, it will ask you questions. There are a few prompts you could use in order to start your flipped interaction. Here is one:

I'm a sophomore college student in a psychology research methods class. I have to write a 12 page research paper but am not sure what topic to do it on. The paper has to be an experiment so I need to manipulate something. Ask me questions about my overall professional goals in order to obtain enough information to provide me with a few reasonable topics. When you have enough information from me, give me a few research questions that will use an experimental format and are appropriate for an undergraduate who is new to the field.

ChatGPT will then ask you questions and hopefully you can end up with a few topics that you can then put back into step 1. I used the above prompt in the following chat with ChatGPT.

I'm a sophomore college student in a psychology research methods class. I have to write a 12 page research paper but am not sure what topic to do it on. The paper has to be an experiment so I need to manipulate something. Ask me questions about my overall professional goals in order to obtain enough information to provide me with a few reasonable topics. When you have enough information from me, give me a few research questions that will use an experimental format and are appropriate for an undergraduate who is new to the field.



Sure, I'd be happy to help you brainstorm a topic for your research paper! Let's start with some questions to understand your interests and goals better:

#### 1. Professional Goals:

- What career path are you interested in pursuing within psychology (e.g., clinical psychology, organizational psychology, developmental psychology, etc.)?
- Are you planning to attend graduate school? If so, do you have a specific program or area
  of focus in mind?
- What populations are you most interested in working with (e.g., children, adults, specific communities)?

#### 2. Personal Interests:

• What areas of psychology do you fy most fascinating (e.g., cognitive psychology, social psychology, neuropsychology)?

 Have you had any personal experiences or observed issues that sparked your interest in a particular area of psychology?

• Are there any current events or societal issues that you are passionate about and would like to explore in your research?

#### 3. Academic Strengths and Preferences:

- What type of research methods do you feel most comfortable with (e.g., experiments, surveys, observational studies)?
- Have you taken any courses or completed any projects that you particularly enjoyed or excelled in?

#### 4. Availability of Resources:

- Do you have access to specific populations or settings that could be useful for your experiment (e.g., schools, clinics, workplaces)?
- Are there any faculty members or mentors at your college who specialize in areas you're interested in and could provide guidance?

Feel free to answer as many of these questions as you can. Once I have a better understanding of your interests and goals, I can suggest a few research questions that would be suitable for an experimental format and appropriate for an undergraduate research project.

I answered some questions it posed.

I don't feel comfortable with any type of research method but I have to do an experiment. I have only taken one elective and that was Personality psychology. It was okay. I kind of like kids but I have no idea what I want to do with my degree.



Based on your interests and current situation, I can suggest some experimental research topics related to children that might be interesting and manageable for a sophomore psychology student. These topics will allow you to manipulate variables and conduct an experiment. Here are a few research questions that fit within the scope of an undergraduate research project:

#### **Potential Research Questions**

- 1. Effect of Positive Reinforcement on Children's Academic Performance:
  - Research Question: How does the use of positive reinforcement (e.g., praise or rewards)
     impact the academic performance of elementary school children during a specific task?
  - Experimental Design: You could have two groups of children, where one group receives positive reinforcement for completing tasks while the other group does not. Measure and compare their performance on academic tasks.
- 2. Impact of Physical Activity on Children's Attention Span:
  - Research Question: Does engaging in physical activity before a learning session improve children's attention span compared to children who do not engage in physical activity?
  - Experimental Design: Randomly as ign children to either a physical activity session or a

quiet sitting session before a learning task. Assess and compare their attention spans during the task using standardized attention span assessments.

#### 3. Influence of Storytelling on Children's Empathy Development:

- Research Question: Can storytelling with moral lessons enhance the development of empathy in children compared to reading non-moral stories?
- Experimental Design: Have children listen to stories with and without moral lessons over a period of time, then measure their empathy levels using age-appropriate empathy scales.

#### 4. Effect of Screen Time on Sleep Quality in Children:

- Research Question: How does the amount of screen time before bed affect the sleep quality of children?
- Experimental Design: Assign children to different groups based on their screen time usage before bed (e.g., no screen time, 30 minutes, 1 hour) and measure their sleep quality using parental reports and possibly wearable sleep trackers.

#### 5. Impact of Music on Children's Stress Levels:

- Research Question: Does listening to calming music reduce stress levels in children during a challenging task compared to no music or different types of music?
- Experimental Design: Have children perform a challenging task under three conditions (calming music, no music, and different genre of music). Measure their stress levels using physiological indicators (like heart rate) and self-reports.

If you like any of these, you can grab it and go to step 2. If not, you can say so and continue on.

None of these interest me.



Let's explore some other areas that might be more engaging for you. Since you're not sure about your specific interests within psychology yet, we can try to identify broader topics that are generally popular and interesting to study. Here are a few questions to narrow down the possibilities:

#### 1. Day-to-Day Life Interests:

- What hobbies or activities do you enjoy outside of academics?
- Are there any particular social issues or current events that you find intriguing?

#### 2. Psychological Phenomena:

• Are there any specific psychological phenomena or behaviors that you've found particularly interesting (e.g., motivation, decision-making, social behavior)?

#### 3. Personal Experiences:

 Have you had any personal experiences or observations that made you curious about certain aspects of human behavior?

#### 4. Professional Environments:

• Do you have any work experience or involvement in extracurricular activities that might give you access to a specific population or setting for your research?



Let's try a different approach by considering these areas. Here are some example topics that might be engaging based on common interests among psychology students:

## **Potential Research Topics**

#### 1. Social Media and Mental Health:

- Research Question: How does the amount of time spent on social media affect college students' levels of anxiety and depression?
- Experimental Design: Manipulate the amount of time participants spend on social media and measure their anxiety and depression levels using standardized scales.

#### 2. Sleep and Cognitive Performance:

- Research Question: Does the quality of sleep affect students' performance on cognitive tasks?
- Experimental Design: Have participants follow different sleep schedules (e.g., normal sleep, reduced sleep) and measure their performance on memory and attention tasks.

#### 3. Impact of Exercise on Stress Levels:

- Research Question: Does engaging in physical exercise reduce stress levels in college students?
- Experimental Design: Compare stress levels of students who participate in a regular exercise program with those who do not, using physiological and self-report measures.

#### 4. Effects of Music on Study Efficiency:

- Research Question: Does listening to music while studying improve students' retention and comprehension of study material?
- Experimental Design: Compare test scores of students who study with and without music.

#### 5. Group Work and Academic Performance:

- Research Question: Does working in groups improve or hinder academic performance compared to working individually?
- Experimental Design: Assign students to work on tasks either in groups or individually and measure their performance outcomes.

Let's say none of these interest me, I can try to answer some of the questions from the start of this screenshot.

I watch a lot of criminal shows and think the minds of criminals are cool.



Great, exploring the minds of criminals can be a fascinating and rich area for research. Here are a few potential experimental research topics related to criminal psychology that you might find interesting:

#### **Potential Research Questions**

- 1. Impact of Violent Media on Aggression:
  - Research Question: Does exposure to violent television shows or movies increase aggressive behavior in individuals?
  - Experimental Design: Randomly assign participants to watch either a violent or nonviolent show, then measure their levels of aggression using behavioral tasks or self-report questionnaires.
- 2. Effect of Social Influence on Ethical Decision-Making:
  - Research Question: How does peer pressure affect individuals' willingness to engage in unethical behavior?
  - Experimental Design: Create scenarios where participants are either pressured by peers to commit an unethical act or are left to make the decision independently, then measure their responses.

But if you do not have many interests or hobbies, ChatGPT will keep trying to figure you out. Go back to the original prompt and the questions it asked. Let's say I have no real response this time.

I only took intro and no topics stuck out to me. I also don't have a lot of interests

< 2/2 >



#### Memory updated

Got it! Since you're not sure about specific interests, let's focus on broad and manageable topics that are commonly explored in undergraduate research. Here are a few experimental research questions that might spark some ideas:

#### 1. Effects of Sleep on Cognitive Performance:

- Research Question: How does the amount of sleep affect performance on a cognitive task?
- Experiment: Manipulate the amount of sleep participants get (e.g., 4 hours vs. 8 hours) and measure their performance on a test of memory or attention.

#### 2. Impact of Music on Stress Levels:

- Research Question: Does listening to different types of music affect physiological measures of stress (e.g., heart rate, cortisol levels)?
- Experiment: Expose participants to various types of music (e.g., classical, upbeat, silence) and measure their stress levels before and after the exposure.

#### 3. Influence of Social Media Use on Moo $\downarrow$

You can keep saying you do not know or give it even the tiniest bit of information. Just keep going until something hopefully sticks out to you.

Another prompt you can use to get you started on this flipped conversation is something like this:

You are a friendly and educated psychology professor who teaches research methodology to
undergraduate college students. You are going to teach me how to think about developing experimental
research questions related to my professional goals. I am going to tell you what I might want to do, and
then I would like for you to give me some questions that will help me to figure out a research topic.

[Note: you can change the "teaches research methods" to whatever class you are using this for. For instance, if you are trying to develop a senior thesis topic, you could say "...who mentors senior college students in regards to their senior thesis projects."]

You are a friendly and educated psychology professor who teaches research methodology to undergraduate college students. You are going to teach me how to think about developing experimental research questions related to my professional goals. I am going to tell you what I might want to do, and then I would like for you to give me some questions that will help me to figure out a research topic.

(S)

That sounds like a great approach! Let's dive into how you can develop experimental research questions based on your professional goals. Start by thinking about the following aspects:

#### 1. Identify Your Career Interests:

 What do you envision yourself doing in the future? This could be working in clinical psychology, research, education, organizational psychology, etc.

#### 2. Consider Key Skills and Knowledge Areas:

 What skills or knowledge do you need for your desired career? This could be skills like data analysis, understanding human behavior, therapeutic techniques, etc.

#### 3. Explore Relevant Psychological Concepts:

Are there specific psychological theories or concepts that align with your career goals?

#### 4. Think About Potential Research Applications:

 How might your research contribute to your field of interest? For example, improving therapeutic techniques, understanding workplace behavior, etc.



To help you narrow down your topic, here are some questions you can consider:

#### 1. If you're interested in clinical psychology:

- What aspects of mental health are you interested in exploring? (e.g., anxiety, depression, therapy techniques)
- How can experimental methods be used to evaluate the effectiveness of different therapeutic interventions?

#### 2. If you're drawn to research:

- What specific area of psychology do you find intriguing or would like to investigate further? (e.g., cognitive processes, social interactions)
- How can experimental research contribute new insights or solutions to existing problems in that area?

You can answer any of the questions, or say you are not sure.

I don't know what I want to do and nothing in psych stands out



That's perfectly okay! Even if you're not sure what you want to do or nothing in psychology has stood out so far, you can still approach your research project with curiosity and explore various areas. Here's a step-by-step approach to help you develop an experimental research question that aligns with a broad range of interests:

## 1. Explore Basic Psychological Processes

- Questions to Consider: What are fundamental psychological processes or phenomena that intrigue you, even if just a little? (e.g., memory, perception, decision-making)
- Example Research Question: How does the time of day affect cognitive performance on memory tasks?

## 2. Look at Everyday Behaviors

- Questions to Consider: Are there common behaviors or habits you've noticed in yourself or others that you find interesting? (e.g., procrastination, stress responses)
- Example Research Question: What is the effect of using a smartphone before bed on sleep quality and next-day alertness?

Again, even the tiniest bit of information can help.

It is kind of weird when my friends and I all say we don't care where we eat or what we do



It's not uncommon for people to feel indecisive or indifferent about certain decisions, especially when it comes to social activities. Here are a few reasons why you and your friends might experience this:

- 1. **Decision Fatigue**: When faced with numerous choices or decisions, people can experience decision fatigue, leading to a lack of enthusiasm or interest in making decisions.
- 2. **Social Dynamics**: Sometimes, people go along with the group to avoid conflict or because they feel pressure to conform, even if they have no strong preferences.
- 3. **Indifference**: It's possible that you and your friends might simply not have strong preferences for those particular decisions, making it harder to choose.
- 4. **Desire for Ease**: Sometimes, people just want to go with the flow and enjoy the moment without stressing over choices.

Keep going with this flipped interaction until you develop a research question.

## STEP 2: Find research articles

Once you have a research question in mind (or get it from ChatGPT), you can put it in ChatGPT, Scholar GPT, or <u>Elicit</u> to find some articles. ChatGPT has added some features and it now allows you to find peer-reviewed articles. You can use ChatGPT/Scholar GPT or Elicit (see below for Elicit if you want to try a different AI platform to expand your knowledge base). For ChatGPT, I will show you two different ways you can utilize it to find articles as some of you may not have access to the specific feature called Scholar GPT. Just know that ChatGPT does NOT pull from as many scholarly websites as Scholar GPT or Elicit.

\*\*Using <a href="ChatGPT">ChatGPT</a> (regular GPT)

I'm using "What are the long-term effects of chronic anxiety on job performance and career success?" from ChatGPT above. I can stay on the same chat as then I only have to copy over the one link in the AI tracking document. I ask, "Can you please find me some references/peer-reviewed articles on...?" It will list the citation as well as a brief description and possibly a link to the study (if it can find one).

Can you please provide me with some references on the long-term effects of chronic anxiety on job performance and career success?



#### Searched 4 sites

Here are some references on the long-term effects of chronic anxiety on job performance and career success that may be helpful for your research:

- Sliwinski, M.J., Smyth, J.M., Hofer, S.M., & Stawski, R.S. (2006). This study examines how
  everyday stressors impact cognitive performance, particularly in terms of working memory
  and attention, suggesting that chronic stress can impair cognitive functions critical for job
  performance and career success. You can find more about the cognitive implications of stress
  in Frontiers.
- 2. **Nguyen, H.T., et al. (2012).** This research highlights the negative effects of work-related stress on cognitive performance in Latino workers, reinforcing the idea that chronic stress can detract from job efficiency and accuracy over time.
- 3. Wu, H. & Yan, N. (2017). This paper discusses the detrimental effects of chronic stress on neuroplasticity and learning, which are essential for adapting to new job roles and advancing in one's career. Their findings can be found in the same review as above.
- 4. Petrac, D., et al. (2009). The study ide vies a moderate positive correlation between everyday stress and error rates on attention tasks, emphasizing the broader impact of stress

5. **PLOS ONE (2017).** This systematic review examines the physical, psychological, and occupational consequences of job burnout, which often accompanies chronic anxiety, detailing how it can lead to reduced job performance and hinder career success. The full review can be accessed here.

These references should provide a comprehensive overview of how chronic anxiety and stress can affect job performance and career success.

You can see that the last article has a link but none of the others in the above screenshot do. You can click on it and it takes you to the journal's website.

If none look relevant, you can ask it to find some more.

Thank you. Can you please find some others?



#### Searched 5 sites

Here are some scholarly references on the long-term effects of chronic anxiety on job performance and career success:

#### 1. Allostatic Load and Chronic Stress:

Chronic stress and anxiety can lead to an allostatic load, causing wear and tear on the
body over time. This can result in various health issues, including cardiovascular
diseases, obesity, weakened immune systems, and mental health disorders such as
anxiety and depression. These health issues can adversely affect job performance and
career success by reducing physical and cognitive functioning (The Journal of Clinical
Endocrinology & Metabolism) (Oxford Academic).

#### 2. Job Stress and Health Effects:

Sustained job stress can lead to serious long-term health problems such as
cardiovascular disease, musculoskeletal disorders, and psychological disorders. These
conditions can impair job performance by affecting concentration, increasing
absenteeism, and reducing overall productivity (UMass Lowell).

If you hover over the link, it shows the article and will take you to it.

#### 1. Allostatic Load and Chronic Stress:

Chronic stress and anxiety can lead to an allostatic load, causing wear and tear on the body over time. This can result in various health issues, including cardiovascular diseases, obesity, weakened immune systems, and mental health disorders such as anxiety and depression. These health issues can adversely affect job performance and career succe
 Stress and Your Health | The Journal of Clinical End...
 Endocrinology & Metabolism) (Oxford Academic).

You can also ask it to find ones similar to another that you do find relevant or interesting.

Thanks. I think number 2 above may work. Are these other references like it?



Searched 7 sites

Here are a few additional references that might be useful for your research on the long-term effects of chronic anxiety on job performance and career success:

- "Physical, psychological and occupational consequences of job burnout: A systematic
  review of prospective studies" This systematic review explores the long-term effects of job
  burnout, which can be closely related to chronic anxiety, on physical, psychological, and
  occupational outcomes. This study can provide insights into how prolonged stress and
  anxiety at work impact overall job performance and career trajectory (PLOS).
- "Job performance in healthcare: A systematic review" Although focused on healthcare,
  this review discusses various dimensions of job performance and how stress and anxiety can
  affect these dimensions. The findings from healthcare can often be extrapolated to other
  fields, offering a broader understanding of anxiety's impact on job performance (BioMed
  Central).
- 3. "The Effect of Stress, Anxiety, and Burnout Levels of Healthcare Professionals Caring for COVID-19 Patients on Their Quality of Life" This study examines how high stress and anxiety levels, particularly during the C( D-19 pandemic, affect healthcare workers' quality of life and iob performance. It highlights the significant negative correlations between anxiety.

You can always narrow or expand your search by using different search terms. You can use ChatGPT to help you find search terms.



#### You

Help me develop some search terms or key words that will work in a library database to get me scholarly articles for the following question: What are the long-term effects of chronic anxiety on job performance and career success?

## 

Certainly! Here are some search terms and keywords that you can use to find scholarly articles on the long-term effects of chronic anxiety on job performance and career success:

- 1. Chronic anxiety
- 2. Anxiety disorders
- 3. Job performance
- 4. Career success
- 5. Occupational outcomes
- 6. Workplace productivity
- 7. Professional achievement
- 8. Work performance
- 9. Employment outcomes
- 10. Long-term impact
- 11. Career advancement
- 12. Job satisfaction
- 13. Occupational success
- 14. Work-related stress





- 15. Mental health in the workplace
- 16. Employee well-being
- 17. Psychological distress
- 18. Performance evaluation
- 19. Job retention
- 20. Occupational health

You can combine these keywords in various ways using Boolean operators (AND, OR, NOT) to refine your search and find relevant scholarly articles in library databases. For example, you might search for "chronic anxiety AND job performance" or "anxiety disorders AND career success". Adjusting your search terms based on the specific focus of your research can help you locate articles that address the long-term effects of chronic anxiety on job performance and career success.



You can then put some of these back into ChatGPT to get some resources. However, it is not an exhaustive list and you will probably need to use other ways to find articles.

Can you please find me some peer reviewed articles on mental health in the workplace?



Searched 6 sites

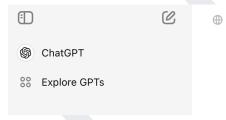
Here are some peer-reviewed articles on mental health in the workplace that might be helpful for your research:

- "The Effects of Workplace Nature-Based Interventions on the Mental Health and Well-Being of Employees: A Systematic Review" This review synthesizes empirical research on the mental health and well-being outcomes of employees engaging in nature-based interventions (NBIs) at their workplaces. It highlights the benefits of NBIs in improving psychological, social, and physical outcomes for employees, though it also points out the need for more research in real workplace settings (Frontiers).
- 2. "A Rapid Review of Mental and Physical Health Effects of Working at Home: How Do We Optimize Health?" This article reviews the mental health impacts of working from home, noting that the effects can be both positive and negative depending on various factors such as organizational support and social connections. The review emphasizes the complexity of work-from-home arrangements and their diverse impacts on well-being, stress, depression, and fatigue (BioMed Central).

You can keep doing similar things or use other search engines to find articles.

\*\*Using ChatGPT (Scholar GPT)

In the top left-hand side of your screen, you should see an icon that says "Explore GPTs."



Click on it and then search for "scholar". You can also scroll down and find it.

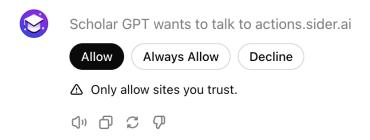
# **GPTs**

Discover and create custom versions of ChatGPT that combine instructions, extra knowledge, and any combination of skills.



Again, I'm using "What are the long-term effects of chronic anxiety on job performance and career success?" from ChatGPT in step 1. I ask, "Can you please find me some references/peer-reviewed articles on...?" It will list the citation as well as a brief description and possibly a link to the study (if it can find one). As a note, it asks if it can talk to Al. It is up to you whether you let it or not. If not, it won't work and you can use regular ChatGPT.

Can you please find me peer-reviewed articles on long-term effects of chronic anxiety on job performance and career success?



If you do allow it, which I am NOT saying you need to or should do, it will look like the following:



#### Stopped talking to

Here are some references and peer-reviewed articles on the long-term effects of chronic anxiety on job performance and career success:

- 1. An Overlooked Dimension Of Diversity: The Career Effects of Chronic Illness
  - Authors: JE Beatty, R Joffe
  - Publication: Organizational Dynamics, 2006
  - Link: ResearchGate PD
  - Summary: Discusses how chronic illness, including severe anxiety, affects career development and long-term career expectations.
- 2. Understanding the dark and bright sides of anxiety: A theory of workplace anxiety
  - Authors: BH Cheng, JM McCarthy
  - Publication: Journal of Applied Psychology, 2018
  - Link: APA Full Text
  - Summary: Explores the dual nature of workplace anxiety and its long-term impact on job performance.
- 3. Effects of chronic job insecurity on Big Five personality change
  - Authors: CH Wu, Y Wang, SK Parker
  - Publication: Journal of Applied Psychology, 2020
  - Link: APA Full Text



It provides full-text links if they are available as well as a one-sentence summary of the article. **You must read the article yourself as it does get it wrong!** But these sentences could help you determine if the article may be a fit or not. You can ask it to find more for you as well or get more specific.

Any more?



Talked to actions.sider.ai

Here are additional references and peer-reviewed articles on the long-term effects of chronic anxiety on job performance and career success:

- 1. Navigating Career Anxiety in the Modern Age: Understanding Its Roots and Remedies
  - Authors: A Chakraborty
  - · Publication: International Journal of Interdisciplinary Research, 2024
  - Link: Psychopedia Journals PDF
  - Summary: Discusses common signs of career anxiety and long-term impacts on career advancement.
- 2. Job performance deficits due to depression
  - Authors: DA Adler, TJ McLaughlin, WH Rogers
  - Publication: American Journal of Psychiatry, 2006
  - · Link: Psychiatry Online PDF
  - Summary: Examines how chronic depression and anxiety affect job performance.
- 3. Coping with mental health conditions at work and its impact on self-perceived job performance

Scholar GPT pulls from more scholarly websites than ChatGPT. As it says, "Scholar GPT is an advanced AI tool that serves as an academic research assistant. It leverages the power of AI, particularly the capabilities of OpenAI's ChatGPT, to provide an immersive and rich experience geared towards alleviating the burden of scholarly research from users. Scholar GPT assimilates knowledge from Google Scholar and numerous other academic resources, rendering it equipped with an extensive library of academic information." If you look at the ChatGPT screenshots when finding articles, it said it only searched 4-5 sites. Using Scholar GPT may be more helpful.

#### \*\*Using Elicit

Once you have a research question in mind (or get it from ChatGPT), you can put it in <u>Elicit</u> to find some articles. This platform is changing a lot but the general idea about how to use it has not changed and probably will not. But, if you get stuck on how to use it, Elicit has a YouTube channel (<a href="https://www.youtube.com/oughtinc">https://www.youtube.com/oughtinc</a>) that might be helpful. You can also search their <a href="help center">help center</a>.

I'm using "What are the long-term effects of chronic anxiety on job performance and career success?" from ChatGPT in step 1. I put that into my tracking Al document along with the copied shared link, saying I got it

from ChatGPT, and then I type it into Elicit and search. You can also use ChatGPT to help you develop search terms if you want to use them for Elicit and/or other search engines. I show this above in step 1 or below in the "Using Other AI sites you have already used (PsycINFO and Google Scholar)" section.

# Screenshot redacted

You will see that it lists out studies on this question.

# Screenshot redacted

If you find some that look promising by reading the abstract summary, you can "check" it by clicking on the check box to the left of the article.

# Screenshot redacted

You can then ask it to show you more like the checked ones (see top of screenshot above). It will then show you more and, again, check the promising ones to get more like them. The check feature also searches forward (i.e., who has cited that article) and backward (i.e., who that article cited) to find other articles. This is the "cited by" feature in google scholar and PsycINFO.

You can also delete studies that do NOT fit your question. Check them off and hit the delete button.

# Screenshot redacted

You check, find more, and delete until you have a list of 10-20 (or however many you want/need) articles.

You can also adjust what information you see about the article. From the start, it only shows you the citation and a summary sentence of the abstract (this sentence is determined by the article AND your question. Thus, if you ask a different question but the same article is used, you may get a different abstract summary sentence). To add information to each article for you to see, you go to the right where it says, "Manage columns." Just know that you can only add two columns in the free version.

# Screenshot redacted

It gives you a lot of options such as the intervention, main findings, etc. This just allows you to add more information to your screen for each article. You can also make your own (e.g., "side effects") by writing it in.

# Screenshot redacted

For instance, let's say I wanted to answer this question about chronic anxiety and job performance but for adults only (i.e., not students), then I can use the population summary to eliminate or check more articles.

## Screenshot redacted

Screenshot redacted

In this example, the first article seems to be about adolescents, which I do not want. I can check and delete it. Keep searching! You should delete articles that are irrelevant to your topic/paper. This allows you to see only those you might use.

I can also use the "filter" function on the top menu to ask it to filter articles according to something specific. Again, if I want to use adults, I can ask it to filter by the word "workers" or "adults."

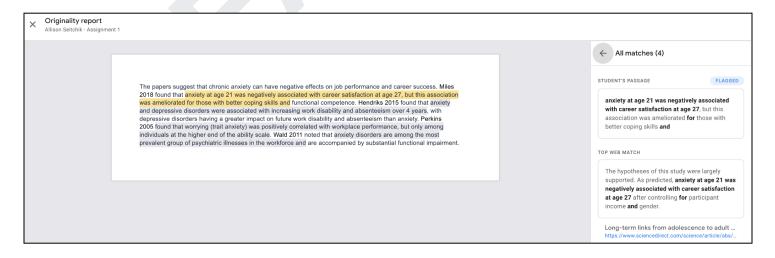
# Screenshot redacted

It links to the DOI and maybe even the PDF of the article itself. If there is no PDF, you will need to use Google Scholar or PsycINFO.

A few warnings, you may be tempted to copy the integrated paragraph it provides you under the question with four different studies it finds.

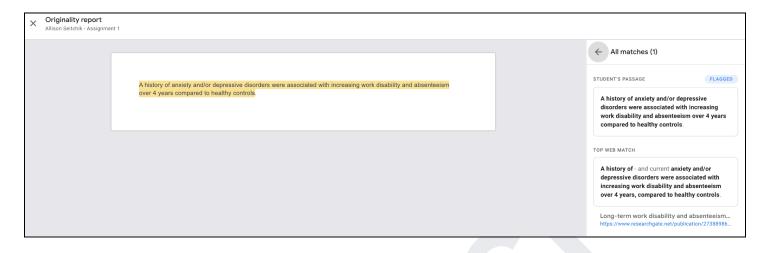
# Screenshot redacted

However, it plagiarizes the study information. You can copy their paragraph into your tracking Al document and use it as a guide. You will NEED to paraphrase. Here is the proof.



You can see from the originality report that each sentence about a specific study (the one in yellow and the others in gray highlight) is copied from the original study. This is plagiarism. **The same is true for the abstract** 

summaries. DO NOT COPY them into your paper as they are plagiarized from the papers themselves. Here is your proof from the originality report.



Elicit is to be used to help you find papers, understand them, and easily find articles related to each other.

If you click on a specific article, it gives you a pop-up of more information on that particular article. You can also click on the link of an article in the summary on the left if one jumps out at you. It takes you directly to that article. The summary is of the first 4 articles listed. As another warning, if you click on an article and it only has the abstract, the information it pulls is ONLY coming from the abstract. This is horrible as researchers often put only the "showy" things in abstracts to pull your attention. Think of it as magic...look here so you don't see what is actually happening over here. Just make sure you READ THE ARTICLES you plan to use in your paper. You may be tempted to ask it to find articles that "Has PDF" only. However, this will eliminate GREAT articles.

## Screenshot redacted

By clicking on the article itself, you can find out what measures it used, the population used, what flaws were seen in the methods *(if it says none, it does NOT mean there are no flaws as it is a computer and not a human)*, the trustworthiness of the article (*again, it is a computer so take this with a grain of salt*), and some other citations that are similar.

# Screenshot redacted

ALWAYS check information you pull from the summaries. You MUST read the article itself.

If you cannot export an annotated bibliography, please copy the DOIs of the articles you want to use from Elicit.

To get the full text, you may need to use Google Scholar or PsycINFO (see below). You have to do this anyway on PsycINFO to get the permalink for your annotated bibliography due in class.

Using Other AI sites you have already used (PsycINFO and Google Scholar)

You should use the sources you already use to find articles, such as PsycINFO and Google Scholar.

- 1. Create key words: You want to use keywords that will pick up on the body of research you are interested in. You should start a chart. For our example here, you might want to do the following chart for anxiety:
  - a. Anxiety = stress = Chronic stress = chronic anxiety = worry
- 2. [This one is a repeat but in case you missed it above...] You can use ChatGPT to help you find search terms.



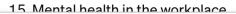
#### You

Help me develop some search terms or key words that will work in a library database to get me scholarly articles for the following question: What are the long-term effects of chronic anxiety on job performance and career success?

#### 

Certainly! Here are some search terms and keywords that you can use to find scholarly articles on the long-term effects of chronic anxiety on job performance and career success:

- 1. Chronic anxiety
- 2. Anxiety disorders
- 3. Job performance
- 4. Career success
- 5. Occupational outcomes
- 6. Workplace productivity
- 7. Professional achievement
- 8. Work performance
- 9. Employment outcomes
- 10. Long-term impact
- 11. Career advancement
- 12. Job satisfaction
- 13. Occupational success
- 14. Work-related stress



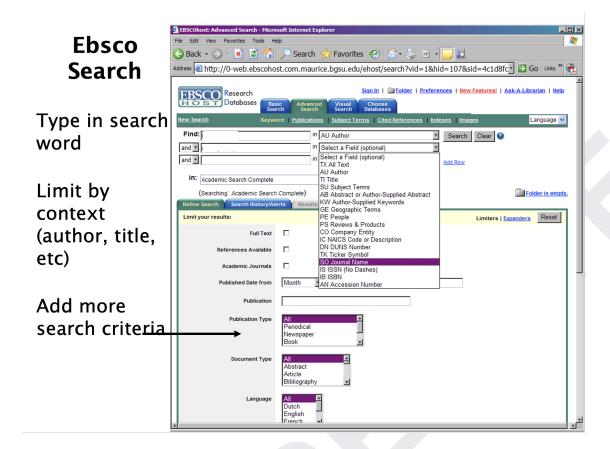


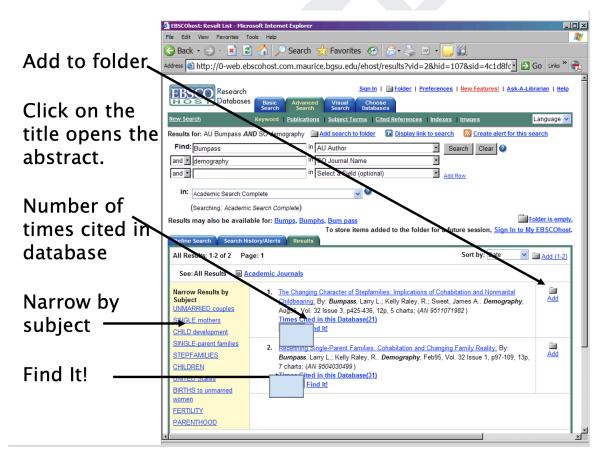
- 15. Mental health in the workplace
- 16. Employee well-being
- 17. Psychological distress
- 18. Performance evaluation
- 19. Job retention
- 20. Occupational health

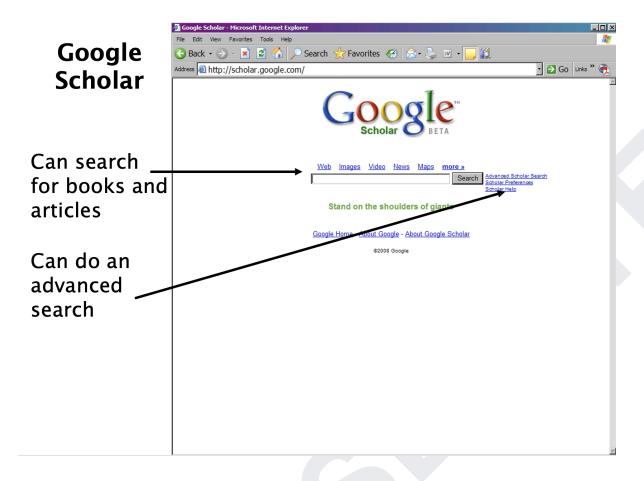
You can combine these keywords in various ways using Boolean operators (AND, OR, NOT) to refine your search and find relevant scholarly articles in library databases. For example, you might search for "chronic anxiety AND job performance" or "anxiety disorders AND career success". Adjusting your search terms based on the specific focus of your research can help you locate articles that address the long-term effects of chronic anxiety on job performance and career success.

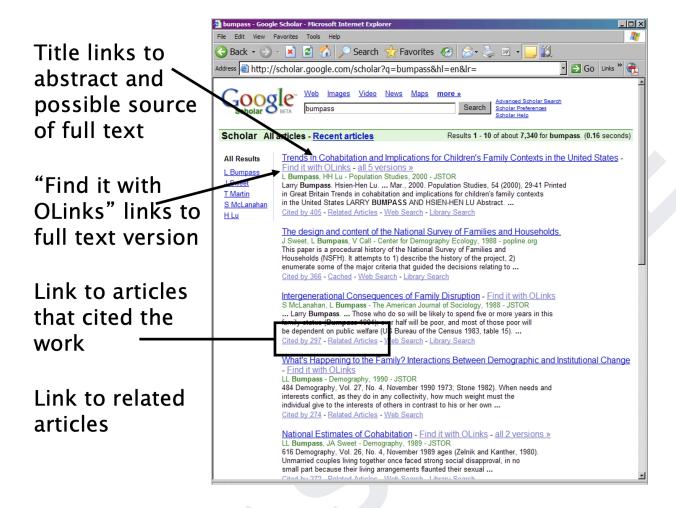


- 3. Search these terms (Use advanced search on PsycINFO (these pictures are from a different college so the colors may be different but it all works the same))
  - a. You can limit year, publication type, population age/range.
  - b. You can go forward in time (who has cited THIS article) and backward in time (who did they cite?).



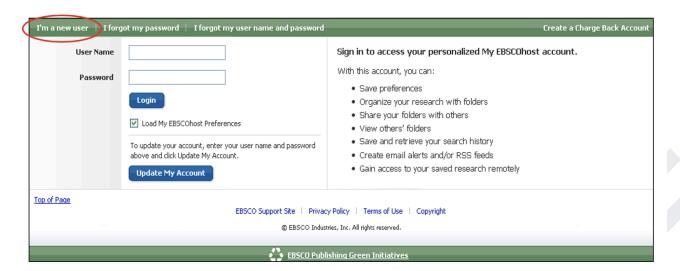


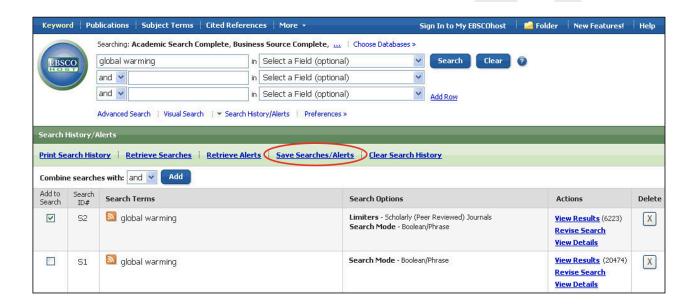




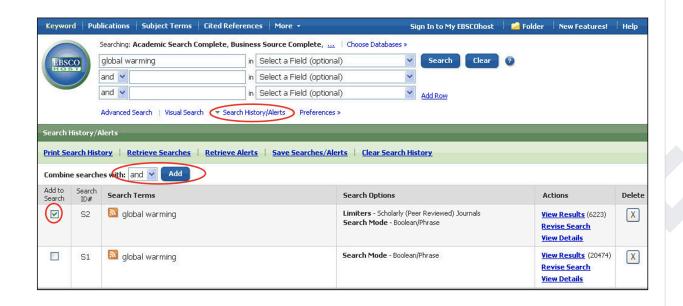
#### 4. Some tips:

- a. Link your keywords and phrases together using the boolean operators (you can see them to the left of the keyword search boxes):
  - i. AND: This is used to narrow a search. It decreases the number of references retrieved, and makes your search specific.
  - ii. OR: It is used to combine related terms /synonyms. It increases the number of references retrieved and makes your search more comprehensive.
  - iii. NOT: It is used to exclude information. It should be used with caution because you may inadvertently exclude relevant articles (e.g., NOT teenagers).
- b. Use truncation symbols (\*) to search for words with different endings
  - advert\* = Advert, adverts, advertise, advertising, advertisement
- Use ? to represent 1 or no characters (e.g., behavio?r will find behaviour or behavior)
- d. Use # to represent 1 character (e.g., wom#n will find woman or women and Organi#ation will find organisation or organization)
- e. You should create an account on PsycINFO as you can save searches

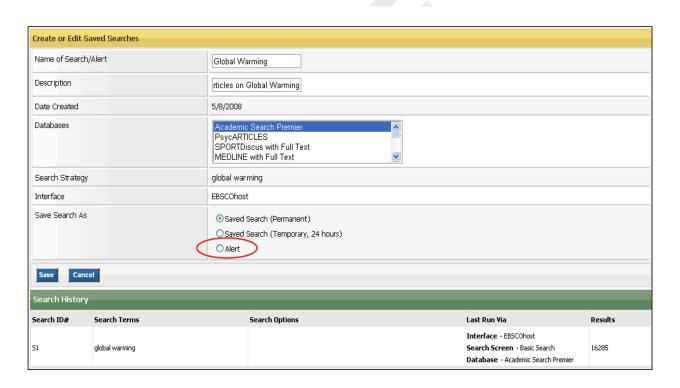




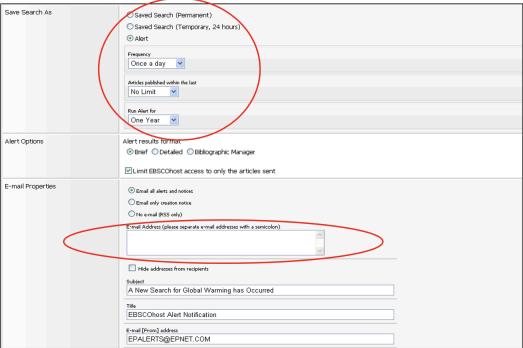
You can save searches, print searches, rerun searches

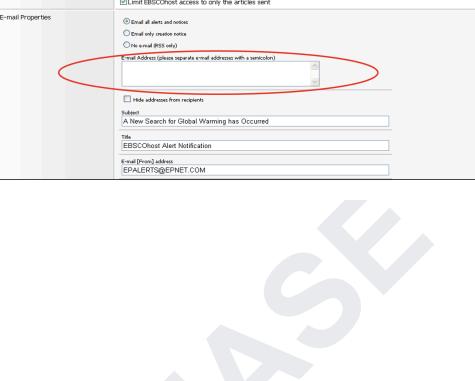


#### You can combine searches



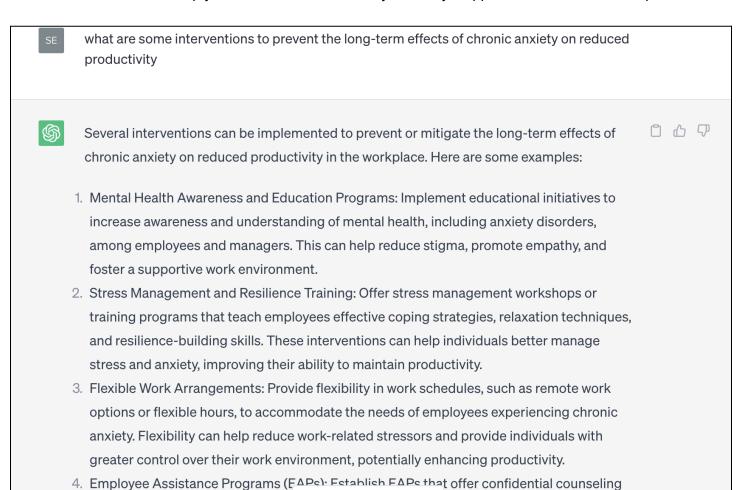
You can create alerts for your searches





### STEP 3: Develop your intervention (if one is needed for your paper)

You can ask ChatGPT to help you find an intervention for your study if applicable. Here is an example:



and support services to employee Grand Regenerate response exists. EAPs can provide access

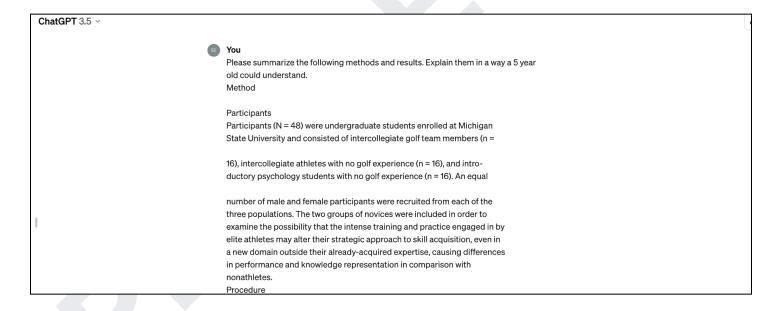
Then pick one and go back to Step 2 to find articles on the intervention you plan to use.

### STEP 4: Read your articles and develop your study

You can always go back and repeat steps if you need more articles or if you read your articles and realize they do not fit. Al can also help you with other steps in writing your paper but it gets tricky as you cannot use it to write your actual paper. Also, remember, the most important thing to note is that if you cannot validate Al's response and information yourself, you cannot use it. You MUST validate and check every piece of information. In other words, if you cannot do the task yourself and check, don't ask Al to do it. Below are some ways to use Al to help you understand articles and guide you through the writing process.

<u>Reading articles:</u> Below are some ways to use AI to help you understand articles <u>after you have read them.</u> You will need to copy and paste whatever parts of the article you want to understand better or in simple ways. **You cannot copy word for word what Chat GPT summarizes when it's helping you understand an article.** 

Copy in entire methods and results sections and tell it to summarize in a way that makes sense (e.g., to a 5 year old or high school student). Below, I took Beilock and Carr (2001; full citation: Beilock, S. L., & Carr, T. H. (2001). On the fragility of skilled performance: What governs choking under pressure? *Journal of Experimental Psychology: General, 130,* 701-725.) and asked it to summarize Experiment 1 for me so that a 5 year old could understand it. I copied the entire methods and results WITHOUT tables and figures. You may have to break it up into methods first and then results.



I do not show you this, but the entire methods and results were copied in.



#### ChatGPT

Alright, let's break this down:

#### What the Researchers Did (Method):

- 1. Who Played Golf? They asked different groups of people to play golf.
  - Group 1: College students who played golf for their university team (16 members).
  - Group 2: College athletes who didn't play golf (16 members).
  - Group 3: College students new to both golf and sports psychology (16 members).
- 2. How Did They Test? They made everyone putt a golf ball towards a target.
  - First, they measured how well everyone putted.
  - Then, they all practiced putting.
  - Finally, they tested them again after practice to see if they got better.
- 3. **They Asked Questions:** After each putt session, they asked everyone questions about how they putt.

#### What They Found (Results):

- Who Putted Best? The college team players were best at putting, both before and after practice.
- 2. **Practice Helped Everyone:** Everyone got better after practicing, but the college team players were still the best.
- 3. **Different Ways of Remembering:** When they asked questions, they found that the college team players remembered putting in a more general way, while the other groups remembered in more detail.

## **Summing It Up:**

People who were already on the golf team were really good at putting. Even when they tried a different kind of putting task, they were still the best. Practice helped everyone improve, but the golf team players were still the best after practicing. Also, the golf team players remembered things in a different way compared to the other groups. Even though the athletes didn't play golf, they remembered things a bit more like the golf team players.

So, practicing helps, but being on the golf team seems to make a big difference in how well someone putts and remembers how they did it.

Then I asked ChatGPT to summarize it for a high schooler as the above may be a little too simple and you lose some of the point of the study. Notice the prompt as I'm having a conversation with it. This is immediately after it gave me the summary for the 5 year old.



#### You

Explain it again but in a way someone in high school would understand.



#### **ChatGPT**

Certainly! Here's a breakdown for a high school-level understanding:

## What They Did (Method):

- Participant Groups: They gathered three groups of college students: those who were on the university's golf team, other college athletes who didn't play golf, and students new to both golf and sports psychology.
- Testing: Everyone was asked to put a golf ball towards a target. They measured their initial putting skills, then everyone practiced, and finally, they tested them again to see if they improved.
- 3. **Questions Asked:** After each putting session, they asked all participants questions about how they putt.

### What They Found (Results):

- Best Putters: The college team players were the best at putting, both before and after practice.
- 2. **Practice Helped Everyone:** Everyone got better after practicing, but the college team players were still the best.

3. **Different Memory Styles:** When they asked questions, they noticed that the college team players remembered putting in a broader way, while the other groups remembered in more specific detail.

## **Summary:**

The college students on the golf team were the most skilled at putting, even when facing a slightly different putting task. Practice improved everyone's skills, but the golf team players remained the best. Additionally, the way the golf team players remembered their putting experience was different compared to the other groups. Even athletes who didn't play golf seemed to remember things a bit more like the golf team players, which was interesting.

This can help me understand what they did and found. You do need to read the articles as you can't use this to write your paper.

**You must read the article yourself as it does get it wrong!** I used Seitchik et al. (2014; full citation: Seitchik, A. E., Jamieson, J., & Harkins, S. G. (2014). Reading between the lines: Subtle stereotype threat cues can motivate performance. *Social Influence*, *9*, 52-68.) and asked it to explain the mediational analyses as those are sometimes hard to understand.



#### You

Explain the following to a high school student: To test whether potentiation of the solving approach directly impaired comparison problem performance, we conducted a mediation analysis following the procedures suggested by Kenny, Kashy, and Bolger (1998) on the number of comparison problems solved incorrectly. As shown in Figure 2, the use of the prepotent solving approach mediated the debilitating effect of subtle stereotype threat on comparison problem performance, Sobel Z  $\frac{1}{4}$  2.04, p  $\frac{1}{4}$  .042. Thus, under subtle threat, females' use of the solving approach mediated the effect of debilitation on comparison problems. Also, replicating the findings from Jamieson and Harkins (2009), the use of the prepotent solving approach mediated the debilitating effect of blatant stereotype threat on comparison problem performance, Sobel Z = 2.33, p = .02.

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#### **ChatGPT**

Alright, let's break it down!

#### **Explanation:**

Researchers' Goal: The scientists wanted to understand if a particular way of solving problems affected how well people did on a type of question called "comparison problems."

What They Did: They used a method called "mediation analysis" to investigate this. It's like looking at how one thing (solving approach) might explain or "mediate" the relationship between two other things (stereotype threat and problem-solving).

The Approach: They followed guidelines suggested by other researchers (Kenny, Kashy, and Bolger in 1998) to do this analysis.

Findings: They found that when people used a specific way of solving problems (called "prepotent solving approach"), it helped reduce the negative impact of something called "subtle stereotype threat" on how well they did on comparison problems. For females, this problem-solving approach seemed to help lessen the negative effect of feeling under subtle threat on their performance in these problems.

Additional Discovery: They also found similar results when the threat was more obvious (called "blatant stereotype threat"). Again, using this particular problemsolving approach seemed to help reduce the negative impact of feeling threatened on how well people solved comparison problems.

In simpler terms, the way people approach solving problems seems to make a difference when they feel stereotyped or threatened in certain situations. This study found that using a specific problem-solving method helped reduce the negative impact of feeling threatened on how well people solved these specific types of comparison problems.









As Chat GPT summarizes, "This study found that using a specific problem-solving method helped reduce the negative impact of feeling threatened on how well people solved these specific types of comparison problems." However, the study found the opposite. Using the specific problem-solving method INCREASED the negative effects of feeling threatened on comparison problems. *Thus, be careful and check everything. READ the article as well.* You also want to track all of this in your "Tracking Al document" by copying the shared link.

Depending on the features and version you are using, ChatGPT may allow you to upload a PDF and then you can ask it questions about it. You can even just ask it to summarize the article. **Be careful and check everything. READ the article as well. YOU can only have AI do something YOU can check.** So check!



Message ChatGPT



ChatGPT can make mistakes Check important info

The paperclip icon allows you to upload a PDF. Do so for whichever article you want and then, BEFORE you hit enter, ask it to do something with the article. I asked it to summarize the article.



Can you take this article and summarize each section (introduction, methods, results, and discussion) for me?



Here is a summary of each section of the article "Subtle Stereotype Threat: The Impact of Threat Level on Male and Female Performance" by Seitchik, Jamieson, and Harkins:

#### Introduction

The introduction of the paper discusses stereotype threat, a psychological phenomenon where individuals underperform in a task due to the awareness of negative stereotypes about their social group. The authors review previous research indicating that stereotype threat can impair performance, particularly in women performing math tasks. The study aims to investigate the effects of subtle versus blatant stereotype threat on the performance of males and females in math tasks. The hypothesis is that even subtle forms of stereotype threat can impact performance, and the study seeks to compare these effects between genders.

### Methods

The methods section describes the experimental design, including the participants, materials, and procedure. Participants were college students randomly assigned to one of three conditions: subtle stereotype threat, blatant stereotype threat, or no stereotype threat. The math test used was from the quantitative section of the GRE, containing both comparison and solve problems. Participants' performance on these problems was measured, and they were also asked to complete questionnaires assessing their perceptions of stereotype threat.

### Results

The results section presents the statistical analyses of the data collected. Key findings include that both subtle and blatant stereotype threat conditions led to the perception of stereotype threat among participants, with no significant difference between the two conditions. Females under stereotype threat (both subtle and blatant) performed worse on the math test compared to those in the no-threat condition, while males' performance was not significantly affected by the threat condition. The analyses also revealed that subtle threat conditions led to increased attempts but lower accuracy in solving problems among females, suggesting that the threat impacts their problem-solving approach.

### **Discussion**

The discussion interprets the results in the context of existing literature on stereotype threat. The findings support the hypothesis that even subtle forms of stereotype threat can negatively impact performance, particularly for females in math-related tasks. The authors discuss the implications for educational and organizational settings, suggesting the need for interventions to mitigate stereotype threat. They also highlight the importance of considering the level of threat and the potential for subtle cues to trigger performance decrements. Future research directions include exploring the mechanisms underlying stereotype threat and developing strategies to reduce its impact.

These summaries capture the main points of each section of the article and provide a concise overview of the research conducted.

As with copying and pasting, ChatGPT got the results wrong. Thus, be careful and check everything. READ the article as well.

You can ask it to give you the bottom line as well.

What is the bottom line of that article?



The bottom line of the article "Subtle Stereotype Threat: The Impact of Threat Level on Male and Female Performance" by Seitchik, Jamieson, and Harkins is that both subtle and blatant forms of stereotype threat can negatively impact performance, particularly for women in math-related tasks. The study found that women under both subtle and blatant stereotype threat performed worse on math tests compared to women who were not under threat, whereas men's performance was not significantly affected by stereotype threat. This suggests that even subtle cues can trigger stereotype threat and lead to performance decrements, highlighting the importance of addressing and mitigating stereotype threat in educational and organizational settings.

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<u>Writing process:</u> Below are some things you can do with AI to guide you through the writing process. Document everything!

A. ChatGPT can help you narrow down and clearly define your study idea. For instance, if you are struggling with a population to use, it can help.



what is a good population to study chronic anxiety and performance?



A good population to study chronic anxiety and performance would ideally consist of working adults across different industries and job roles. This would allow for a diverse representation of individuals who experience chronic anxiety and are actively engaged in various occupational settings. It is important to include both genders and individuals from different age groups to capture a broad range of experiences and potential variations in the impact of chronic anxiety on performance.

Here are some considerations for selecting a population:

- Job Diversity: Include individuals from a variety of industries and professions, such as healthcare, finance, education, technology, and customer service. This diversity will help capture the impact of chronic anxiety on performance across different occupational domains.
- Job Levels: Include employees at different levels within organizations, ranging from entrylevel positions to managerial and leadership roles. This variation can provide insights into how chronic anxiety affects performance at different career stages.
- 3. Sample Size: Aim for a sufficiently large sample size to ensure statistical power and the ability to detect meaningful effects. This will depend on the specific research objectives and the complexity of the analysis planned.
- 4. Recruitment Strategy: Consider recruiting participants from multiple organizations to reduce potential biases associated with a single workplace. This can enhance the generalizability of the findings.
- B. ChatGPT can also help you with determining HOW to measure a variable of interest in your study. You need to use it as a starting point and not plagiarize. Find articles to cite and be specific about your operational definitions.



what performance measures should i use to study chronic anxiety and performance?



When studying the relationship between chronic anxiety and performance, it is important to select performance measures that are relevant, reliable, and valid. Here are some performance measures commonly used in research studies investigating chronic anxiety and performance:

- Objective Performance Metrics: Utilize objective measures that assess specific
  performance outcomes. These may include quantitative indicators such as sales revenue,
  production output, error rates, task completion time, or quality ratings. Objective
  performance metrics provide concrete and tangible measures of job performance.
- 2. Supervisor Ratings: Obtain performance evaluations or ratings provided by supervisors or managers. This can include assessments of overall job performance, specific job-related skills, task proficiency, interpersonal skills, and other relevant dimensions. Supervisor ratings can provide insights from an external perspective.
- 3. Self-Reported Performance: Use self-report questionnaires or scales to measure individuals' self-perception of their job performance. Participants can rate their perceived effectiveness, productivity, efficiency, and quality of work. Self-reported performance measures provide insights into individuals' subjective evaluation of their own job performance.
- 4. Peer Ratings: Incorporate peer ratings or coworker assessments of job performance. Peers can evaluate aspects such as collaboration, teamwork, communication skills, and overall contribution to group projects or tasks. Peer ratings offer a perspective from colleagues who directly observe an individual Regenerate response

Or, ask it about specific measures. Then check them against peer-reviewed articles.



How can I measure chronic anxiety?



Measuring chronic anxiety typically involves using validated assessment tools or scales that capture the presence and severity of anxiety symptoms over an extended period. Here are some commonly used measures to assess chronic anxiety:

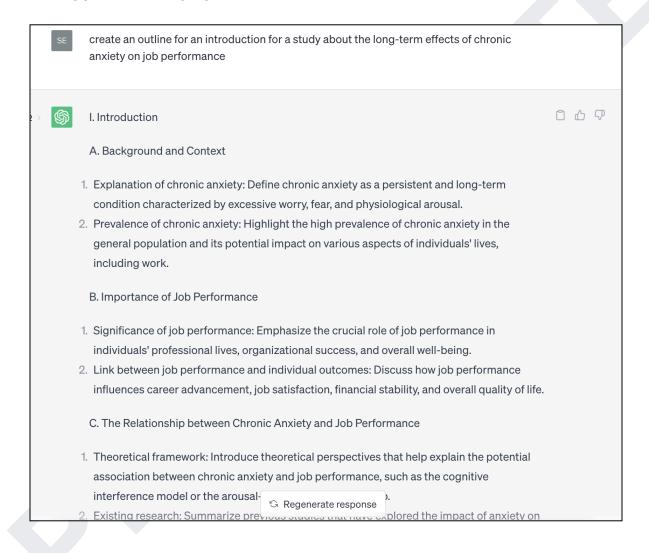


- 1. Generalized Anxiety Disorder 7-item scale (GAD-7): The GAD-7 is a self-report questionnaire that assesses the severity of generalized anxiety symptoms over the past two weeks. It consists of seven items that capture symptoms such as excessive worry, restlessness, irritability, and difficulty concentrating. Participants rate the frequency of each symptom on a scale from 0 (not at all) to 3 (nearly every day), with total scores ranging from 0 to 21.
- 2. Penn State Worry Questionnaire (PSWQ): The PSWQ is a widely used self-report measure that assesses trait-like worry tendencies associated with generalized anxiety. It consists of 16 items rated on a Likert scale, with higher scores indicating higher levels of chronic worry.
- 3. Beck Anxiety Inventory (BAI): The BAI is a self-report measure that assesses the severity of anxiety symptoms over the past week. It consists of 21 items that capture various cognitive, emotional, and physiological symptoms of anxiety. Participants rate the intensity of each symptom on a scale from 0 (not at all) to 3 (severely), with total scores ranging from 0 to 63.
- 4. State-Trait Anxiety Inventory (STAI): The STAI is a widely used measure that assesses both state anxiety (current anxiety level) and trait anxiety (general propensity to experience anxiety). It consists of two separate scales, each containing 20 items rated on a Likert scale.
- 5. Anxiety Sensitivity Index (ASI): The ASI measures an individual's fear of anxiety-related sensations and the belief that the al consequences. It consists of multiple subscales that capture dimerent aspects of anxiety sensitivity, such as fear of

### STEP 5: Write your paper

Now you are ready to write your paper, whether it is the paper itself or an outline for the paper. Below are some things you can do with AI to guide you through the writing process. Document everything! Also, it is all a starting point and you can NOT just copy their responses.

A. ChatGPT can help you with your outline. Please note, you do need to follow my outline (or an outline given to you by your professor) over that provided by Al. You also need to use it as a starting point and not plagiarize.



3. Gap in knowledge: Identify the need for comprehensive research examining the long-term effects of chronic anxiety on job performance.

#### D. Purpose and Objectives

- 1. Research aim: Clearly state the aim of the study, which is to investigate the long-term effects of chronic anxiety on job performance.
- Research objectives: Present specific objectives that will guide the study and address the research gaps, such as exploring the dimensions of job performance affected by chronic anxiety or identifying potential mediators and moderators in the relationship.

#### E. Study Overview

- 1. Study design: Describe the prospective cohort design, which will allow for the assessment of chronic anxiety and job performance over an extended period.
- Methodology: Provide a brief overview of the data collection methods, measures, and analyses to be used.
- 3. Expected contributions: Highlight the potential contributions of the study in enhancing our understanding of the long-term effects of chronic anxiety on job performance and informing interventions and strategies to support individuals in the workplace.
  - F. Outline of the Study
- Provide a brief outline of the subsequent sections of the research paper, highlighting the key components and findings that will be discussed.
- II. Literature Review (This section will delve deeper into the existing research on chronic anxiety and its impact on job performance.)
- III. Methodology (This section will describe the study design, sample selection, measures used, data collection procedures, and data analysis.)
- IV. Results (This section will present the findings related to the long-term effects of chronic anxiety on job performance.)
- V. Discussion (This section will interpret the results, discuss their implications, and provide insights into the potential mechanisms and interventions to prevent or mitigate the negative effects of chronic anxiety on job performance.)
- VI. Conclusion (This section will summarize the main findings, discuss the study's limitations, and propose directions for future research.)
- By following this outline, the introduction section of the study will provide a comprehensive overview of the research topic, highlight its significance, and lay the foundation for the subsequent sections of the paper.

B. You can check your hypothesis on ChatGPT and then **go back to the literature to make sure it is accurate**.



Is this an accurate hypothesis based on past research?: Chronic anxiety can be good for job performance.



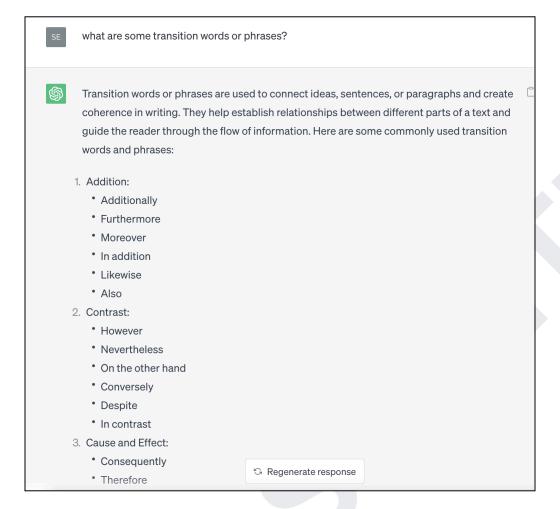
Based on past research and current understanding, it would not be accurate to hypothesize that chronic anxiety is inherently beneficial for job performance. Chronic anxiety is generally associated with negative effects on various aspects of individuals' lives, including their work performance. However, it's important to note that the relationship between anxiety and job performance is complex and can be influenced by various factors.

While some studies have suggested that moderate levels of anxiety may enhance performance in certain situations, chronic anxiety, characterized by persistent and excessive worry and fear, is more likely to have detrimental effects on job performance. Chronic anxiety can lead to difficulties in concentration, decision-making, problem-solving, and interpersonal interactions, ultimately hindering productivity and quality of work.

It is important to consider the specific context, individual differences, and job demands when examining the relationship between anxiety and job performance. Some individuals may thrive under low to moderate levels of anxiety, as it can enhance motivation and focus. However, chronic anxiety is more likely to impede performance and overall well-being.

It is advisable to base hypotheses on the existing body of research, which consistently supports the notion that chronic anxiety is generally detrimental to job performance.

- C. You can use AI to check your grammar. There are some free ones but they do have limitations on how many words it can edit a day. You may need to jump from one to another or do one paragraph a day. ChatGPT is NOT a good place to check grammar as it does change your writing in the process. If you use ChatGPT for grammar check, do it one paragraph at a time and CHECK the accuracy of it. Make sure the words are still your own, are accurate, and reflect your style of writing. I would highly recommend you NOT use ChatGPT to check grammar and, instead, use another AI platform like one the following:
  - a. DraftCoach (on some LMSs such as Canvas or Blackboard)
  - b. Grammarly (not all features are free and it is limited)
  - c. WordTune (not all features are free and it is limited)
  - d. ProWritingAid (not all features are free and it is limited)
  - e. GrammarBot (not all features are free and it is limited)
  - f. Trinka (not all features are free and it is limited)
- D. It can help you with transitions between paragraphs or studies within paragraphs.



E. You can also ask it for limitations, future directions, or implications for your study.



#### Υοι

what are some limitations about a study on the chronic effects of anxiety on job performance?



#### **ChatGPT**

Studying the chronic effects of anxiety on job performance involves complexities and challenges that can result in certain limitations. Here are some common limitations associated with such studies:

- Sample Selection Bias: Participants who agree to take part in the study might differ systematically from those who do not, leading to a biased sample. For instance, individuals with severe anxiety might be less likely to participate, affecting the representation of different anxiety levels in the study.
- 2. Self-Report Measures: Reliance on self-report measures to assess chronic anxiety and job performance can introduce biases due to participants' subjective interpretations or tendencies to provide socially desirable responses. It might not always accurately reflect their actual performance or anxiety levels.
- 3. Measurement Validity and Reliability: The accuracy of measuring chronic anxiety and job performance might be influenced by the reliability and validity of the assessment tools used. Some measures might not fully capture the complexity or nuances of chronic anxiety or the multifaceted nature of job performance.

Message ChatGPT...

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ChatGPT can make mistakes. Consider checking important information