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## Leveraging AI to Develop and Refine Research Topics in the Counseling Field

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**Leveraging AI to Develop and Refine Research Topics in the Counseling Field**  
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**Counseling Psychology Community Services (CPCS)**  
**20 Points**

**Note:** This assignment is part 1 of a 7 part assignment for a research methods course, where Master of Counseling students will learn how to conduct research in their respective fields. Please watch the video overview of this assignment for more information.

**Purpose and Objectives of the Assignment**

The purpose of this assignment is to utilize AI tools to develop and refine a research topic within the counseling field. By engaging with AI, students will enhance their ability to identify emerging trends, analyze existing literature, and generate innovative research questions. This assignment aims to empower students with the skills needed to integrate AI into their research process, ultimately leading to more informed and impactful studies in counseling.

- Students will use AI tools to facilitate brainstorming sessions, generating a wide range of potential research topics in the counseling field.
- Students will learn to leverage AI to assess the relevance and significance of various research ideas, considering current trends and challenges in counseling.
- Students will utilize AI to help refine and narrow down board ideas into specific, focused research topics, suitable for further exploration.
- Students will explore how AI can inspire creative and innovative approaches to developing unique research questions within the counseling domain.
- Students will critically reflect on the ideas generated during the brainstorming process, using AI to prioritize topics that align with their research interests and goals.

When developing a research question, consider asking yourself the following questions:

- What topics in counseling am I passionate about or curious to explore further?
- What are the emerging issues, trends, or gaps in the counseling field that need further investigation?
- Which groups or individuals or communities am I most interested in studying or impacting with my research?
- Why is this research important? What potential impact could it have on the field of counseling or on the lives of others?
- Can I find sufficient data, literature, and resources to support the investigation of this topic? Is it feasible to conduct research in this area?
- Is my research question too broad or too narrow? Can it be reasonably addressed within the time and resource available?
- How does my research question build upon or challenge existing studies and theories in the counseling field?
- What research methods would be most appropriate for investigating this question? If it more suited for qualitative or quantitative approaches?
- Are there any ethical concerns related to my topic, such as confidentiality, informed consent, or potential harm to participants?

- How does this research question align with my long-term academic or professional aspirations in counseling?

These questions are to help guide you to choosing a topic area that you feel comfortable moving forward with.

**Assignment details:**

**Step 1: Familiarize yourself with Perplexity AI**

- **Time Required:** 30 Minutes
- **Tasks**
  - Visit the Perplexity AI website and explore the interface.
  - Watch the overview video on *Perplexity AI Overview: How it works, and how it compared to ChatGPT search and Google SGE:*  
[https://youtu.be/FS\\_SbgE70P8?si=40wrp1DtqbeLeaFc](https://youtu.be/FS_SbgE70P8?si=40wrp1DtqbeLeaFc)
  - Practice asking simple questions to get a feel for the tool’s responses.
- **Assignment**
  - Complete the “What I…” around Perplexity AI

Know	Want to Know	Learned	Remaining Questions?

**Step 2: Brainstorm Potential Topics**

- **Time Required:** 1 hour
- **Task:**
  - Begin by asking Perplexity AI broad, open-ended questions related to your interests in the counseling field. Examples include:
    - “What are some emerging trends in counseling?”
    - “What are the current challenges faced by counselors?”
    - “What areas in counseling need more research?”
- **Assignment:**

- Complete the following tables on ideas, topics, or concepts that interest you.
- Ask Perplexity AI 5 questions and record your responses

Question asked	Response from Perplexity AI	Ideas, Topics, or Concepts
<p>E.g., What are some emerging trends in counseling?</p>	<p>E.g., Several emerging trends are shaping the future of counseling and psychotherapy:</p> <p><b>Teletherapy and Online Counseling</b></p> <p>The rise of teletherapy and online counseling is revolutionizing mental health care delivery. This approach allows clients to access therapy from the comfort of their homes through video calls, phone sessions, or messaging. It breaks down barriers like physical distance, time constraints, and stigma, making mental health care more accessible and convenient.</p> <p><b>Integration of Artificial Intelligence</b></p> <p>AI is playing an increasingly important role in mental health treatment. Some key applications include:</p> <ul style="list-style-type: none"> <li>• Analyzing written communications for suicide prevention</li> <li>• Delivering daily cognitive behavioral therapy via smartphone apps</li> <li>• Offering therapeutic video games for conditions like ADHD</li> </ul> <p>While AI won't replace traditional therapy, it can support and enhance treatment approaches.</p> <p><b>Personalized and Precision Mental Health Care</b></p> <p>Advancements in genetics and neuroscience are enabling more personalized treatment plans. Genetic testing and brain imaging can provide insights into an individual's predispositions and brain function, allowing therapists to tailor interventions more precisely.</p> <p><b>Holistic and Mindfulness-Based Approaches</b></p> <p>There's a growing emphasis on holistic care that addresses the interconnections between mental, physical, emotional and spiritual well-being. Mindfulness and meditation techniques are being increasingly incorporated into therapy to promote self-awareness, stress reduction and emotional regulation.</p> <p><b>Virtual and Augmented Reality</b></p> <p>VR and AR technologies are expanding the possibilities for therapy, potentially allowing practitioners to connect with patients across geographical boundaries in immersive ways.</p> <p><b>Integration of Specialized Techniques</b></p> <p>Therapies like hypnotherapy and Eye Movement Desensitization and Reprocessing (EMDR) are gaining more mainstream acceptance as research validates their efficacy for certain conditions.</p>	<p>E.g.,</p> <ol style="list-style-type: none"> <li>1. Teletherapy and Online Counseling</li> <li>2. Integration of Artificial Intelligence</li> <li>3. Personalized and Precision Mental Health Care</li> <li>4. Holistic and Mindfulness-Based Approaches</li> <li>5. Virtual and Augmented Reality</li> <li>6. Integration of Specialized Techniques</li> <li>7. Focus on Cultural Competency</li> </ol>

	<p><b>Focus on Cultural Competency</b></p> <p>There's increasing recognition of the need for therapists to develop cultural competency to provide more effective and respectful care to diverse populations. As the field evolves, these trends are making counseling more accessible, personalized, and technologically-enhanced while still maintaining the core human connection that is central to effective therapy.</p>	
Question 1:		<input type="text"/>
Question 2:		<input type="text"/>
Question 3:		<input type="text"/>
Question 4:		<input type="text"/>

Question 5:		
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**Step 3: Refine your Ideas**

- **Time Required:** 1 hour
- **Task:**
  - Take your list of brainstormed ideas and ask Perplexity AI follow-up questions to delve deeper into specific topics. Examples include:
    - “What are the main research gaps in trauma counseling?”
    - “How has the role of telehealth evolved in counseling during the past five years?”
  - Use AI to identify the significance, scope, and feasibility of each potential topic.
- **Assignment:**
  - Complete the table using the 5 research question above and ask a follow up question for each area.
  - Example search: “What are the main research gaps in trauma counseling?”  
Significance, Scope and Feasibility

Question	Significance	Scope	Feasibility
E.g., What are the main research gaps in trauma counseling?	E.g., “Understanding the main research gaps in trauma counseling is crucial for advancing the field and improving therapeutic outcomes for individuals who have experienced trauma. Trauma counseling is a vital area within the broader field of mental health, addressing the needs of those who have undergone significant psychological stress or trauma. By identifying the gaps in current research, this question aims to highlight areas that lack sufficient evidence-based practices, innovative approaches, or comprehensive studies. Filling these gaps can lead to the development of more effective interventions,	E.g., “This research question is broad but manageable within a focused academic study. The scope includes reviewing existing literature in trauma counseling, identifying under-researched areas, and analyzing the implications of these gaps on practice and policy. Potential focus areas within this scope could include:  <b>Specific populations:</b> Gaps in research related to how trauma affects different demographic groups (e.g., children, veterans, refugees).  <b>Counseling techniques:</b> Limited studies on the effectiveness of specific	E.g., “The feasibility of researching this question is high, particularly for a master's level project. The study would involve conducting a thorough literature review, which is achievable within the typical constraints of time and resources. Access to existing databases and journals will provide the necessary materials for identifying research gaps. The question is sufficiently broad to allow flexibility in choosing a specific focus area within trauma counseling, yet it can be narrowed down as needed to ensure depth and manageability. Furthermore, the findings from such a study can be valuable for guiding

	better training for counselors, and improved support systems for trauma survivors.”	therapeutic approaches (e.g., EMDR, CBT, trauma-informed care).  <b>Long-term outcomes:</b> Insufficient research on the long-term effects of trauma and the sustainability of counseling outcomes.  <b>Intersectionality:</b> How factors like race, gender, and socioeconomic status intersect with trauma and its treatment.”	future research projects or for application in clinical practice, making the investment of time and effort worthwhile.”
Question 1			
Question 2:			
Question 3:			
Question 4:			

Question 5:			

**Step 4: Narrow Down a Focused Research Question**

- **Time Required:** 1 hour
- **Task:**
  - Choose your top 2-3 ideas and use Perplexity AI to help narrow them down into specific, **ONE** research question. Examples include:
    - “How can I formulate a research question on the impact of telehealth on adolescent mental health counseling?”
    - “What are some key factors to consider when researching counselor burnout?”
  - Refine your question based on AI feedback, ensuring it is clear, focus, and researchable.
- **Assignment:**
  - Complete the following questions:

1. What are your top 2-3 ideas?

2. What were the research question options that were given:

- E.g., “How can I formulate a research question on the impact of telehealth on adolescent mental health counseling?”
  - Perplexity Responses:
    - What are the main challenges adolescents face when using telehealth for mental health counseling?
    - How does telehealth compare to in-person counseling for adolescents in terms of effectiveness?
    - What are the potential long-term impacts of telehealth on adolescent mental health outcomes?



- How can telehealth be improved to better meet the needs of adolescents?
- What are the ethical considerations in using telehealth for adolescent mental health counseling?

Your response:

3. What is your research question?
- E.g., “How does telehealth compare to in-person counseling for adolescents in terms of effectiveness?”

Your response:

### **Step 5: Review and Reflect**

- **Time Required:** 30 minutes
- **Task:**
  - Review the research question you’ve develop.
  - Reflect on its relevance, feasibility, and alignment with your academic or professional goals.
  - Use Perplexity AI to double-check that your question has not been extensively covered in existing literature.
- **Assignment:**

- Using your research question answer the following question: “Has your research question been extensively researched?”
- E.g.” How this question been extensively research in the counseling field? “How does telehealth compare to in-person counseling for adolescents in terms of effectiveness?”

Perplexity response: This question has been researched extensively in the counseling field, but there are still some gaps in our understanding. Here's an overview of the current state of research:

Existing Research: Several studies and meta-analyses have compared telehealth to in-person counseling for adolescents:

1. Meta-analyses have indicated that the efficacy and retention of telehealth and face-to-face care for mental health treatment might be equivalent in adults.
2. Some non-inferiority research has shown video counseling to be as good as or better than in-person care.
3. Studies have demonstrated that telehealth can be an effective alternative for therapy sessions, with numerous studies showing it to be as effective as traditional face-to-face consultations.

Key Findings: The research has revealed several important points:

- **Comparable Effectiveness:** Many studies suggest that telehealth can be as effective as in-person counseling for adolescents in many cases.
- **Therapeutic Alliance:** There is evidence that teleclinicians can establish a therapeutic alliance during telemental health sessions with youth and families.
- **Engagement:** Some research indicates that telehealth may increase engagement among adolescents due to their comfort with digital platforms.

Research Gaps: Despite the existing research, there are still areas that require further investigation:

1. **Long-term Outcomes:** More research is needed on the long-term effectiveness of telehealth compared to in-person counseling for adolescents.
2. **Specific Conditions:** While some conditions have been studied, research is lacking for telehealth treatment of certain less common mental health conditions in adolescents.

3. **Privacy Concerns:** There's a need for more research on adolescents' perceptions of privacy in telehealth sessions compared to in-person counseling.
4. **Therapeutic Alliance:** While some studies show positive results, further research is needed on the therapeutic alliance and engagement via telemedicine, especially for adolescents.
5. **Cultural Competency:** More research is needed on how telehealth may facilitate cultural access in diverse populations.

In conclusion, while this question has been researched extensively, there are still areas that require further investigation to fully understand the comparative effectiveness of telehealth and in-person counseling for adolescents.

- Do you need to adjust your topic area based on information provided by Perplexity AI?

Your response:

- Using your research question answer the following question: “Has your research question been extensively researched? Do you need to adjust your topic area based on information provided by Perplexity AI?”

### Step 6: Finalize your Research Topic

- **Time Required:** 30 minutes
- **Task:**
  - Finalize your research question and prepare a brief explanation (1-2 paragraphs) of why you chose this topic, including its significance and potential impact on their field of counseling.
- **Assignment:**
  - Write your brief explanation in the table below:

### Rubric

Criteria	Excellent (4 Points)	Good (3 Points)	Fair (2 Points)	Needs Improvement (1 Point)	Points
<b>1. Familiarization with Perplexity AI</b>	Demonstrates thorough understanding of Perplexity AI by effectively exploring its features and functionalities.	Demonstrates a good understanding of Perplexity AI with minimal issues in navigating or utilizing its features.	Demonstrates a basic understanding of Perplexity AI but struggles with some features or interactions.	Demonstrates little to no understanding of Perplexity AI and struggles to use it effectively.	/4
<b>2. Brainstorming Potential Topics</b>	Generates a diverse and comprehensive list of relevant research ideas using Perplexity AI, showcasing creativity and alignment with counseling trends.	Generates a good list of research ideas, with most being relevant and aligned with current counseling trends.	Generates a limited list of ideas, some of which may not be fully relevant or aligned with counseling trends.	Generates very few or irrelevant research ideas, showing minimal engagement with the brainstorming process.	/4
<b>3. Refinement of Ideas</b>	Skillfully refines broad ideas into focused and relevant research questions, with clear reasoning supported by AI-generated insights.	Refines ideas into researchable questions with some AI-generated insights but may lack depth in reasoning or focus.	Refines ideas with difficulty; final research questions are somewhat unclear or not fully researchable.	Struggles to refine ideas; final research questions are unclear, unfocused, or poorly developed.	/4
<b>4. Narrowing Down to a Focused Question</b>	Selects the most relevant and impactful research question(s), with strong justification and clear focus, based on comprehensive AI analysis.	Selects a relevant research question with good justification, though the focus may need slight refinement.	Selects a research question that lacks clear focus or strong justification; AI analysis may be underutilized.	Fails to select a focused or relevant research question; justification is weak or missing.	/4
<b>5. Review and Reflection</b>	Provides a thorough and insightful reflection on the process, clearly explaining the significance of the chosen research question and its alignment with goals.	Provides a thoughtful reflection, explaining the significance of the chosen research question, with minor gaps in alignment or depth.	Provides a basic reflection with limited explanation of the significance or alignment of the research question.	Provides a minimal or unclear reflection, with little to no explanation of the research question's significance or alignment.	/4

Additional Comments:

Total \_\_\_\_/20 Points