Module 14: Developing Research Questions

Lecture Goals

To understand the difference between a topic and a research question

To develop a research question for your study and for your participants

What is a Research Question?

A research question should be:

- **Clear**: Provides enough specifics to easily understand its purpose.

- **Focused**: Narrow enough that it can be answered thoroughly.

- **Concise**: Expressed in few words.

- **Complex**: It is not answerable with a simple "yes" or "no."

- **Arguable**: Its potential answers are open to debate.

Source: https://writingcenter.gmu.edu/guides/how-to-write-a-research-question

Research Questions

- You should ask a question about an issue that you are genuinely curious and/or passionate about.

- The question you ask should be developed based on:

  a. your type of research.

  b. the literature review as it related to your topic.

Source: https://writingcenter.gmu.edu/guides/how-to-write-a-research-question

A study's research question should be developed based on the type of research

Quantitative Data

➤ Picture is 12" by 18"

➤ With frame 16" by 22"

➤ Weighs 12.5 lbs.

➤ Cost $300

How can we conduct a quantitative research study about this picture?

Access/Site:

Randomly select 2 types of paintings in 100 museums in North Florida

Research Question:

Do you have a hypothesis? What are you trying to prove?

▶ Based on research/lit review, studies report that on average, oil paintings are 12" x 18"

▶ Great! – But why? What are the findings in studies indicate about this phenomenon. What do they report about other types of paintings?

▶ Does the type of painting (oil and acrylic) predict the size of the paintings in North Florida?

Questions that yield to "yes" or "no" answers

Qualitative Data

➤ Gray and brown colors

➤ Brown frame

➤ Texture shows brush strokes

➤ Geometric shapes

How can we conduct a qualitative research study about this picture?

Access/Site:

Randomly select a type of paintings in a museums in North Florida

Research Question:

No hypothesis needed! What are you trying to evaluate/analyze/describe/know more about? Although you will have an idea of what findings you might have, you must put all of that aside and go in there with a blank canvas to truly collect data form the participants' perspective and not you.

▶Based on research/lit review, studies report that paintings have several qualities about the color and material used.

▶Great! – But why? What are the findings in studies indicate about this phenomenon. What do they report about other types of paintings?

▶What are the qualities of paintings in North Florida?

▶You can have sub questions.

Questions that yield to "yes" or "no" answers DO NOT belong here!!!

Question and Sub-Question

What are the qualities of *paintings in North Florida?*

▶ Based on research/lit review, studies report that paintings have several qualities about the color and material used.

▶ Great! – But why? What are the findings in studies indicate about this phenomenon.

▶ What do they report about other types of paintings?

Main Question:

▶ **What are the qualities of expensive *paintings in a privately owned gallery located in an affluent city in North Florida ?***

Sub-Questions:

▶ What are the differences and similarities of the colors in the three most expensive paintings in the gallery?

▶ What are gallery patrons reporting about the three most expensive paintings that were sold last month in the gallery?

Kahoot! Time

www.kahoot.it

Samples

- **Unclear:** *How should social networking sites address the harm they cause?*
  Clear: *What action should social networking sites like MySpace and Facebook take to protect users' personal information and privacy?*

- **Unfocused:** *What is the effect on the environment from global warming?*
  Focused: *What is the most significant effect of glacial melting on the lives of penguins in Antarctica?*

- **Too simple:** *How are doctors addressing diabetes in the U.S.?*
  Appropriately Complex: *What main environmental, behavioral, and genetic factors predict whether Americans will develop diabetes, and how can these commonalities be used to aid the medical community in prevention of the disease?*

# Typical Data Collection Methods for Quantitative Approaches

Quantifiable Sources

- Labs and Surveys

Surveys

- The key to developing a good survey questionnaire is to keep it short while ensuring that you capture all of the information that you need. This is not an easy task.

- There are two different types of questions:

  - Structured or fixed response question (Quantitative): Ranking, Rating, Specific Options Based on Literature Review.

  - Non-structured or open question (Qualitative)

- In Many instances basic information (general) will be needed – general demographics (e.g., gender)

Summarize the Main Findings from the Literature (Study Rationale)
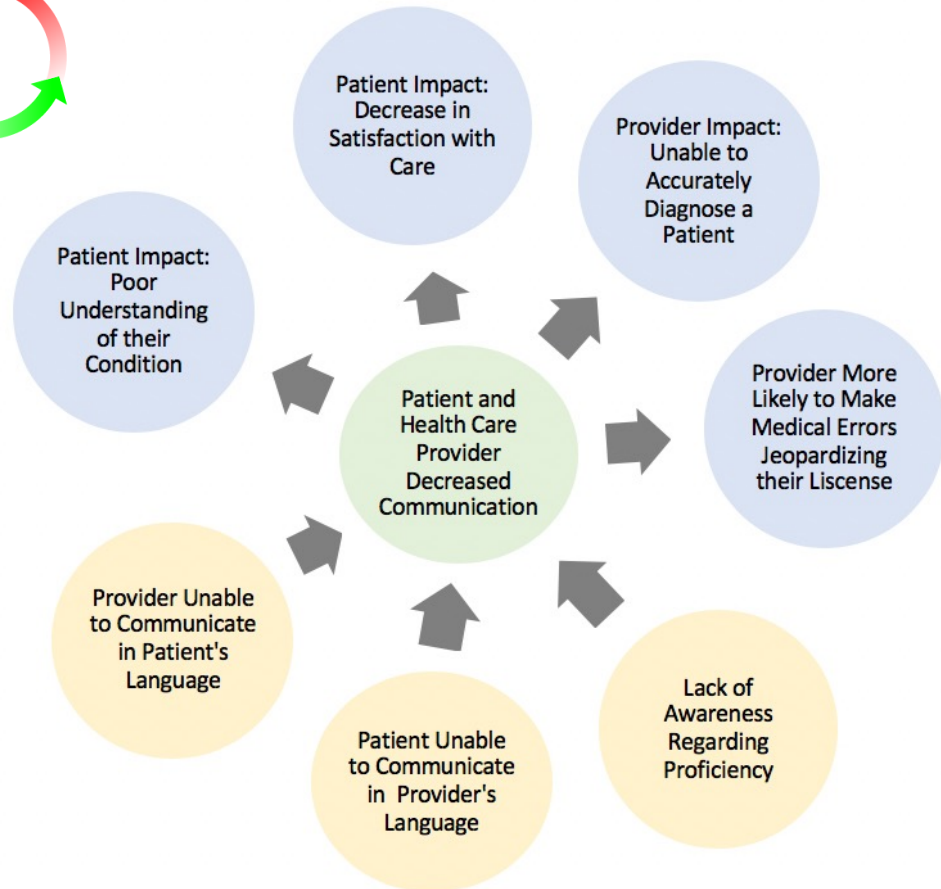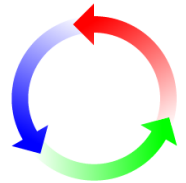
Your interview questions should relate to the literature review, not in terms of making them leading and giving you a specific result, but in terms of assessing the main idea in the literature review. Pick one or two specific areas based on the relevance of the literature review. Let's give it a try!

The Difference Between a Nosey Person, a Researcher, and a Pushy Person: Interviewing Participants

A Pushy Person

A study exploring the services of a cancer center:

▶ Are the social support services offered in the best that you have seen in your entire career?

▶ Do this social support services help families with single parents more than families with both parents?

A Nosey Person

A study exploring the services of a cancer center:

▶ **Interviewer:** Can you describe the support services offered in the center?

   ▶ **Answer:** Yes, they are great.

▶ **Interviewer:** Can you describe the services provided to children in families with single parents affected by cancer?

   ▶ **Answer:** Yes, they are fun

▶ **Interviewer:** Awesome! Thank you for your time.

A Researcher

▶ Interviews, Focus Groups, Open-Ended Questionnaires

▶ Always gather descriptives (years in the profession) NOT personal (where do you live?)

▶ Don't use leading questions, use neutral questions

▶ Always probe; a form of redirecting

Here are some examples of neutral questions

- "How did you feel when you couldn't find the item you were looking for?"

- "How often do you go online to shop at Amazon.com and Walmart.com?"

- "What makes you prefer booking flights with Expedia over Travelocity?"

- "Where are you when you shop online for coffee?"

- "What are some reasons you like to order groceries online?"

Source: https://morenberg.com/useful-probes-user-interview-questions/

A Researcher

A study exploring the services of a cancer center:

- **Interviewer:** Can you describe the support services offered in the center?

  - **Answer:** Yes, they are great.

- **Interviewer:** Can you tell me more?

- **Interviewer:** What specifically about the services makes them great?

- **Interviewer:** Can you describe the services provided to single parents with children affected by cancer?

  - **Answer:** Yes, they are fun

- **Interviewer:** What specifically about the services makes them fun?

  - **Answer:** Mainly the referrals, access to self-care treatments, and didactic educational material.

- **Interviewer:** Of the types of resources and educational materials you mentioned, which one is the most important and why?

Probes

- The "tell me more" probe
- The "uh huh" probe
- The "echo" probe
- The "it sounds like you were saying" probe
- The silent probe
- The "how so?" probe
- The "why is that important?" probe
- The "could you give me an example?" probe
- The "tell me about the last time you did that" probe

Cautionary Tales

❑ Don't Reinvent the Wheel!

❑ Don't Be Extra

❑ More is More

❑ Response and Retention Rates

❑ Make it Meaningful (Quality Over Quantity)

Ask Yourself:

▶ Is it Worth the Effort?

▶ Does it Answer My Research Question?