Speaking Notes
PADM 5502
Week 9, Fall 2022
Dr. Neubauer

WHERE WE ARE

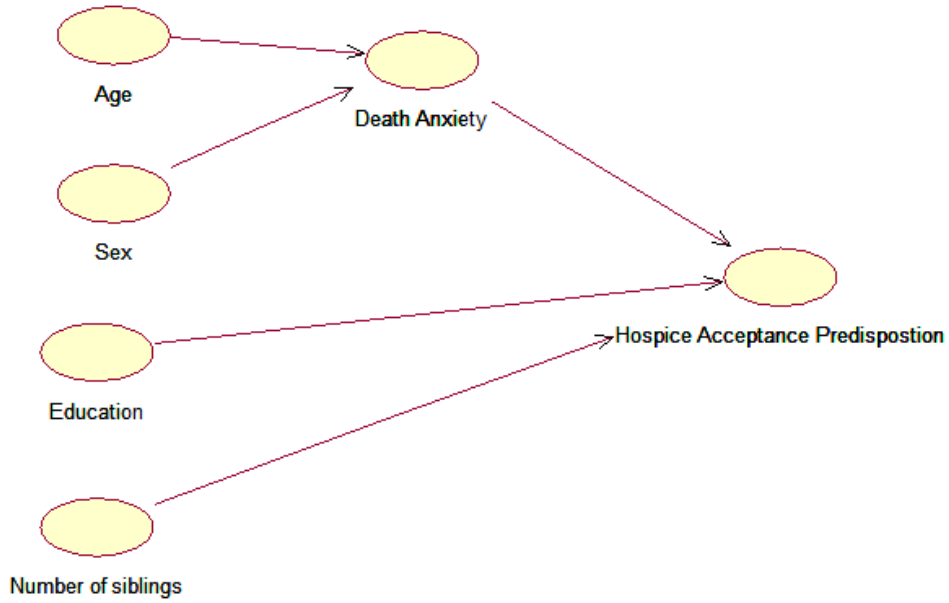
		Week begins . . .	Week ends . . .	Assignment due . . .
Week 9	**FALL BREAK**	**Monday October 10** **Last day to withdraw without academic penalty Oct. 14**	**Sunday October 16**	
Week 10	**Discussion 3A**	**Monday October 17**	**Sunday October 23**	
Week 11	**Discussion 4A follow up**	**Monday October 24**	**Sunday October 30**	**Sunday October 30**
Week 12	**ACTIVITY**	**Monday October 31**	**Sunday Nov. 6**	
Week 13	**Opportunity to redo and resubmit ACTIVITY**	**Monday Nov. 7**	**Sunday Nov. 13**	**Sunday Nov. 13**
Week 14	**ePortfolio assignment**	**Monday Nov. 14**	**Sunday Nov. 20**	**Sunday Nov. 20**
Week 15	**THANKSGIVING WEEK**	**Monday Nov. 21**	**Sunday Nov. 27**	
Week 16	**FINAL EXAMS**	**Monday, Nov. 28**	**Last day of classes, Dec. 1**	**Sunday Dec. 4**
Week 17	**Final grades submitted to Registrar's Office Monday, Dec. 12**	**Monday, Dec. 5**		

- We must complete the assignment/form in preparation for the capstone course.
- I think the activity assignment will be to create an entire survey research instrument.
- I need to think some more about the portfolio assignment.

QUICK REVIEW

In recent weeks I introduced independent and dependent variables and the visual modeling of a research design. We reviewed the construction of hypotheses (as taught here) and some other things.

Here is an example of a very simple research model.



That two variables are CORRELATED does not necessarily mean that one is the CAUSE of the other. It is possible that one or more other variables are DRIVING (CAUSING) both of them to "move together." The "relationship" between the two variables may be a SPURIOUS RELATIONSHIP.

https://en.wikipedia.org/wiki/Spurious_relationship

Causation requires that there be a reasonable explanation of why one might drive/cause the other.

SAMPLES AND POPULATIONS

To test hypotheses we want to do INFERENTIAL STATISTICS. Without a sample of people to survey that "is an accurate reflection of" the RELEVANT POPULATION of people (we want to infer something about), we cannot really test hypotheses.

A CENSUS is a survey of an entire POPULATION. It is usually impossible to do; and is not necessary to do.

Difference between a POPULATION and a SAMPLE.

Difference between a PARAMETER and a STATISTIC.

SIMPLE RANDOM SAMPLE – every entity in the population has an EQUAL KNOWN PROBABILITY of being asked to participate.

SAMPLE OF CONVENIENCE.

STRATIFIED SAMPLE.

SNOWBALL SAMPLE.

With a "good" sample, STATISTICS derived from the sample ARE ACCURATE ESTIMATES of PARAMETERS in the population.

You can test HYPOTHESES using STATISTICS derived from a SAMPLE, if you have a sample of reasonable size (and if the sample itself is not BIASED).

To draw a SIMPLE RANDOM SAMPLE, you need a SAMPLING FRAME. A sampling frame is the list from which to draw participants RANDOMLY.

A voter registration list is a sampling frame.
A list of citizens eligible for jury duty may be a sampling frame.
THE SELECTION OF A SAMPLING FRAME/LIST DEPENDS UPON THE POPULATION OF INTEREST.

For many POPULATIONS there is no sampling frame available. It may not be possible to draw a simple random sample. But you should do better than a SAMPLE OF CONVENIENCE.

If a survey instrument is given to an entire POPULATION of people of interest, that is called a CENSUS.

If a sample from a population is a SIMPLE RANDOM SAMPLE, it is not necessary to complete a census. You can INFER from your findings in the sample to the population.

If you really have a SIMPLE RANDOM SAMPLE (every person in the population has an equal, known probability of being asked to participate) a sample of 200 or so is usually adequate in order to estimate the relevant PARAMETERS IN THE POPULATION by using STATISTICS IN THE SAMPLE.

A SAMPLE OF CONVENIENCE is NOT a simple random sample.

A SNOWBALL SAMPLE is NOT a simple random sample.

A STRATIFIED SAMPLE ***may*** approach being a simple random sample.

To "draw" a simple random sample, you need a SAMPLING FRAME. A sampling frame is a list of everyone in the population. Usually, a sampling frame is not available. If you are interested in certain opinions of REGISTERED DEMOCRATS in Dougherty County, a list is available. If you are interested in certain opinions of women who have had abortions in Georgia since 1990, it is very unlikely a list is available.

When there is no sampling frame (list) available, you draw the best sample you can, but it is not a simple random sample.

The BENEFIT of a simple random sample is that STATISTICS derived from the sample are likely to be good estimates of PARAMETERS in the population.

You cannot assume this if you use a SAMPLE OF CONVENIENCE. Predicting the outcome of an election by sampling people who live in a very expensive neighborhood is not likely to produce an accurate prediction.

You cannot assume this if you use a SNOWBALL sample.
https://en.wikipedia.org/wiki/Snowball_sampling

For purposes of most public administrators doing their own primary research, STRATIFIED SAMPLING may be the best of what is possible.