

Summary

Each student will complete a small research project and paper by performing the early stages of test development, using a small survey test (2 items). Every student's questions will be combined in one large survey on a website. The entire class will take this survey. The resulting data will be provided for every student to use. You will then individually analyze your test item(s) and write up the results. You will submit the paper in two parts: A Proposal and a Final Paper. The length of these papers and the opportunity for detailed feedback on your writing style serve to meet CSUSM's writing requirement for this course.

Format & Length:

Proposal: APA format, 500 words (about 2 pages)

Paper: APA format, 2000 words (about 8 pages, not including graphs or figures).

To Do: (see syllabus for due dates)

- Pick a field and subfield of psychology (e.g. "Clinical Psychology", "Anxiety Disorders")
 - Find one *Review* article that matches this topic (see lecture notes for tips on finding *Review* articles)
- Pick a Construct within this topic
 - Find one *Original Research* article that uses a specific test of the construct.
- Design two small one-item tests which both measure the construct.
The test item(s) should be Ordinal or Numerical (Interval /Ratio). Don't use Nominal. Most students choose a Rating or Likert format. If you use a Likert format, be sure to provide Numbers for your answer (e.g. 1=Strongly Agree, 2=Agree... etc.)
- Decide how to measure the Reliability of your measurements
- Decide how to measure the Validity of your measurements (Convergent and Divergent)
- Write your Proposal (use the outline and sample below)
- Turn in Proposal for Grade & Feedback - see website for due date and upload information.
- Participate in taking the test battery (online)
- Analyze your data, creating at least two scatterplots with linear regression graphs.
- Write your final paper (following the outline from your Proposal)
- Turn in final paper for grade - see website for due date and upload information.

Predictors and Criteria -- Data Available

All students will take the online survey, which will include all test items from all students. In addition, we will collect additional demographic data and some other variables. If you want to collect additional data that is not on this list, please check with me.

Age (years)

Gender

Score on Midterm Exam 1, Score on Midterm Exam 2

Overall GPA

NEO-FFI factors (N, E, O, A and C)

Frequently Asked Questions

Q: May I work with other student(s)? A: Yes, but your specific topic must be unique, at both journal articles must be unique, and your paper must be written by yourself. In other words, group papers are not allowed.

Q: Can I use another student's test data as a construct measure? A: Yes.

Q: Are there any topic areas/subject matter limits? A: Yes, we will discuss these issues in class.

Q: How do I analyze the data? A: You may use any software package you wish. However, GraphPad Prism is recommended since we will be using it in class.

Q: Can I include more than two test items? A: yes, but talk to me first about the need for this.

Q: If my hypothesis doesn't work out, I don't get the results I expected, will that hurt my grade? A: No, you are graded on style, form, grammar, APA rules, and following the scientific method, but not on whether your results were as predicted.

Q: I'm having trouble with writing structure, grammar, style, etc. What do I do? A: talk to me, the TA, or get help from the CSUSM Writing Center for tutoring: <http://www.csusm.edu/writingcenter/> or from PARL:

<https://www.csusm.edu/psychology/currentstudents/parl.html>

Outline of Proposal:

Please use APA format and follow this outline format carefully. A sample outline is included below.

Abstract

Write an APA-format abstract that summarizes your proposal.

BackgroundSubfield/Topic:

Describe the kind of psychology and the focus area you are interested in. Provide reference to a single *review* article and summarize this topic in one paragraph.

Construct:

Describe the specific construct that you wish to measure. Provide a reference to a single *original research* article and summarize how the author(s) measured this construct.

Rationale:

This paragraph should describe *why* you are proposing this particular study. Contrast your study back to the prior studies in terms of subjects, methods, and measures.

Methods:Test Questions:

Provide two test questions, both of which measure your *Construct* as defined above. The questions must be grammatically correct, easy to understand, and in a format that will translate easily website-based survey. The questions should both use either Ordinal or Continuous (numeric) measurement scales.

Establishing Reliability:

Indicate which *kind* of reliability you intend to measure, and specify the two variables that you will correlate with each other.

Establishing Validity:

Describe how you will establish *convergent* validity (by showing that some variables are correlated). Describe how you will establish *divergent* validity (by showing that some variables are not correlated).

Sample Proposal and Outline:

The sample on the next page represents roughly a "B-" grade. The abstract and background are short and somewhat vague. The two test questions appear to have no Content Validity for the Construct. Some references are missing. An "A" effort would include a longer background section with more discussion of the existing test, and would contrast your proposed test with the existing test. The two test items would be better written and more related to the construct. An "A" effort would include a reference for all tests used (such as the NEO-FFI) and do a better job of explaining why the particular constructs (such as Neuroticism or Agreeableness) were chosen. Note that all content and references in this sample are fake.

A new, better, and briefer measure of Anxiety

Proposal for Psychology 402 Project

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Abstract

Smith (1945) reviews clinical psychological measure of worry and concludes that anxiety is an important construct that has both beneficial and detrimental effects on people. Smythe & Wesson (1986) describe their *anxiosimian* scale and show that it has acceptable reliability and validity. In our proposed study, 68 college-age students will receive the NEO-FFI, as well as two new measures of Anxiety that we have created (A1 and A2). We will measure parallel-forms reliability of the measures by correlating A1 with A2. We will calculate criterion validity by showing that A1 and A2 correlate with the "N" (neuroticism) factor from the NEO-FFI, but do not correlate with the "A" (agreeableness) factor.

Background

Does the construct of Anxiety exist, and can we measure it? In a review article, Smith (1945) reviews the field of Clinical Psychology and focuses on the state of measurements of anxiety, noting that many clinicians consider anxiety and fear to be related, but independent constructs that can be experienced independently by patients.

One such measure of Anxiety is described by Smythe & Wesson (1986). Their *anxiosimian* scale is a 10 item self-report measure which is written on banana peels and is scored by trained monkeys. In their study, they administered the scale to two groups of subjects, a "normal" control group (N=34) and a patient group suffering from monkey phobia (N=17). They found the control group scored much higher than the patient group and concluded their measure "is good as gravy." This is a somewhat puzzling conclusion, since the authors report that no actual gravy was used in the experiments.

Although Smythe & Wesson's scale was claimed to be both reliable and valid, we believe that the materials required make it difficult to use in non-tropical locations. It would be useful to have a shorter scale that is both reliable and valid and more convenient to administer. We therefore propose to create a new scale which we will validate on some subjects.

Methods

Subjects

(not needed for the proposal. Final paper should include a standard description of the research subjects including basic demographics of Age, Gender.)

Materials and Measures

Question A1 : Do you like monkeys? Choices: Likert scale with values (1 = Strongly Disagree, 2 = Agree, 3 = Neutral)

Question A2 : Rate your love for simians? Choices: Rating scale (1-10, 1 = "not at all", 10 = "very much")

Neuroticism: the N scale from the NEO-FFI will be used.

Agreeableness: the A scale from the NEO-FFI will be used.

Analyses

Analysis 1 : in order to measure the test-retest reliability, answers on A1 will be correlated with those on A2 using a Pearson Product-Moment correlation.

Analysis 2A : to measure convergent validity, A1 and A2 will be correlated with the N and A scales of the NEO-FFI. We predict a strong correlation between A1 with N and between A2 and N, but a weak correlation between both A1 and A2 with the NEO-FFI A scale.

Results

(not needed for the proposal. Final paper should include full Results sections including at least 2 scatterplot graphs with linear regression lines.)

Discussion

(not needed for the proposal. Final paper should include a full Discussion section that summarizes the findings, relates them back to the literature, and suggests directions for future research.)

References

Smith J (1945). Anxiety, Fear, and Panic. *J Rev Clin Psych*, 3, 145-147.

Smythe S & Wesson Z (1986). The Banana Scale of Anxiety, *J Clin NPTRS*, 6, 234-299.

(other references should be included in this section as appropriate)