

Stat 2001

Lit Review and Research Project assignments Fall 2021

Literature review assignment

Due date: topic due week 4 before class; report week 6 before class

Weight: 10 core points 7 needed for mastery, (all 5 articles need to be single study quantitative)

Estimated time: 4 -6 hours

The Literature Review is a report describing the published information on an issue or topic. It is more than a collection of information: it includes analysis and interpretation of the significance and implications in light of a problem that the researcher defines.

Objectives of assignment. This literature review assignment is designed to:

- Help you develop your ability to read quantitative research; specifically abstracts.
- help you understand a topic in health sciences that you are interested in.
- help you gain practice in library research and the use of published sources;

Instructions: Your task is to choose a topic in health information, public health, or health sciences – preferably a topic that you are interested in and conduct a preliminary literature review (quantitative research abstracts only) as outlined below by reading 5 research abstracts on single studies (Do not include Meta Analyses, Summary research, or literature reviews... or you will need to redo). You will need to clear your topic with Taras to prevent duplication. Post your ideas for topics to OneNote as soon as possible.

What you need to hand in: (all on OneNote in you private Assignments section – I will post templates for you.)

1. A reference list using APA 6 format of the 5 abstracts you read. {2 points format and completeness }
2. A bibliography (see attached template). {3 points completeness and relevancy of responses }
3. A 200-300-word summary of what you found. Describe any patterns and or trends that you have observed. If there was no overarching trend, then multiple trends can be discussed. The trends could be methodological (i.e. relating to the research methods used by the researchers) or relate to conclusions the researchers came to (e.g. Do the studies agree or contradict each other?). I will provide sample summaries in the course content section in OneNote (please use references). {5 points: description and discussion of trend – 4, format – 1 }

Bibliography

Author (Year) If there are multiple authors list only the first and 'et al'	Type of quantitative study. Descriptive, Experimental, or predictive only!!!	Write out major Research Question and simple findings (with numerical evidence) provided by researchers: i.e. strength and direction of correlation/ RR/comparison of means – include <i>p</i> -values and or confidence intervals. One or two bits of information will be enough.

Mini Research Project : The purpose of this assignment is for you to participate in all 7 research process steps. You, along with up to 3 partners, will design and conduct a small study in which you will **make an inference about a population based upon a sample**.

Parameters: Your study will have 2 research questions (RQs) based on 3 variables:

- one dependent (outcome) variable, which will be a measurement variable;
- one independent (exposure) variables, which will be categorical (2 or more categories);
- one more independent (exposure) variable, categorical (2+ categories) **or** measurement in nature.

Step 1 – the idea stage:

1. start with a good research idea that you are interested in, and which you refine into a great Research Question (RQ) for each pair of variables. Make sure to spend time meeting with me and slow thinking about a RQ for each pair of independent/dependent variables. Remember that you will be collecting the data so don't set up a study of New Zealand sheep farmers' attitudes towards hockey.☺ and given that we're in a pandemic situation all data collection will likely be online.
2. set your team up on OneNote: Taras will provide instructions for setting this collaboration up.

Task description of expectations:

- A. Outline of proposal:** Fill in the 'Outline of proposal table' template provided on OneNote - see page 15 of this document.
- Research questions must be clear and researchable. Get help from me with this. If you are not sure about your variables or research question send me an email or make an appointment to see me; I can help you by giving you feedback about the appropriateness of the research questions and variables, the scope of your project, and/or its feasibility.
- B. Full proposal:** 2 page (maximum) double spaced proposal, post it to OneNote
1. State the 2 research questions.
 2. Describe your target population, sampling and recruitment design with a separate set of instructions for sampling and recruitment?
 3. Describe your data collection plan as a set of instructions that others can follow: If you are using a survey approach write out the questions you will ask? If observation approach, describe your plan in detail.
 4. Describe in detail the data analysis tools you will use to answer the RQ, include your plan for practical significance and inferential statistics.

SPSS template: blank SPSS data file – post your research questions and the blank data set to the appropriate OneNote page. Name the file *surname1.surname2.surname3.template.f20.sav*
{ 1mark for appropriate template, 4 marks for report - 1 for each section }

- C. Preliminary Report** – after approval by Taras, collect data, enter it into the SPSS template you created, run the correct analysis and have fun answering your RQs.
1. Post the data set to OneNote on the page dedicated for this material. Data set must have the following name format: *surname1.surname2.surname3.data.f20.sav*.
 2. Fill in the appropriate page on OneNote including the following: Research Question, variable name(s) and type(s), appropriate graphs, charts and other numerical calculations, and a first draft of an answer to the Research Question.
- { 2 marks for data set and appropriate data entry, 3 for appropriate analysis & answer }

D. Final Report: 3-5 pages (if it were printed); 12-point font double spaced-

1. Title Page: title of your study in a prominent place + your names, course and my name – be creative☺
2. Introduction – (keep it short): Write out your research questions. What makes your research topic interesting and important? If the topic is not important to ‘the world’ then describe what made it interesting to you.
3. Methods/Design: write each of these out in point form as a set of instructions!
 - a. sampling: Make sure to describe the population frame (target population) that you will be making inferences about before describing the sampling design.
 - b. recruitment: How did you convert potential participants into actual participants?
 - c. data collection: How did you collect the data?
4. Conclusion/Findings: Answer the research questions – each one separately – providing appropriate evidence using both practical and statistical significance (inference). Sum up what you have learned about the relations between independent and dependent variables. Then go beyond the data by answering the following: What important knowledge have your results helped add to? What new research questions or studies are needed to help advance knowledge in your topic?
5. Self-evaluation: Assess the internal and external validity of your findings.

To what degree is your sample a good representation of the target population (*external validity*). If you had the time and money what would you have done differently in order to ensure that you had stronger external validity. What % of individuals you approached agreed to participate? (What was the participation rate?)

Evaluate the degree to which your data represents the ‘true characteristics/opinions’ of the participants in your study (*internal validity*). If you had the time and money what would you have done differently in order to ensure that you had stronger internal validity
6. Graphs/Charts: include within your report or simply in an appendix. Don’t just copy-paste into your report anywhere; format your graphs/charts to fit nicely into your report and include titles!

Project Evaluation: broken up by task

	<u>points</u>
A. Outline of proposal	2 core
B. Full Proposal and SPSS template	5 core
C. Preliminary report	5 core
D. Final report (see rubric)	13 non-core

Rubric for Final Report

Section	Weak	Satisfactory	Excellent	Weight
Title Page	Missing or incorrect information.	Complete and correct information	Complete and correct information with elegant formatting	/1
Introduction	Some connection to ‘the world’ made, RQ present and basic information provided.	Connection to world is clear, Relevance of RQ and relevance to researchers established	Connection to world, relevance of RQ to ‘the world’ and researchers strongly established.	/1
Description of Methods and Design	Does not demonstrate understanding of sampling recruitment and data collection.	Basic description of sampling, recruitment and data collection.	Excellent description of sampling, recruitment and data collection such that replication possible. High level of detail present.	/3
Conclusion and Findings	Incomplete or unclear answers to research questions. Little or no discussion beyond basics.	Complete and clear answer to research question with simple extension beyond the basics.	Answer to research question goes beyond reporting the numbers – accurately reasoning about the research question, and imagining beyond the data at hand.	/3
Self-Evaluation	Incomplete or unclear understanding of internal and external validity. Little or weak description of how to strengthen the study.	Complete and clear understanding of internal and external validity. Competent description of how to strengthen the study.	Excellent understanding of internal and external validity. Detailed and relevant description of how to strengthen the study.	/2
Format & Graphs/Charts	Report formatted sloppily or without clear section. Hard to read, or with skips and jumps. Incomplete or irrelevant graphs and charts. Graphs and charts without titles or disconnected from the report.	Report formatted competently with clear sections fitting with Final report requirements. Complete and relevant charts. Well formatted, and connected to the report	Report formatted professionally with clear headings, subheadings fitting with Final report requirements. Judicious use of charts (no extraneous or missing information) seamlessly integrated into the report.	/3