

American University of Beirut
Faculty of Health Sciences
Research Project
XXXX 345
Course Outline

Course Description

During this course, students are required to carry out a research project within his/her area of concentration or interest, as an individual or as part of a group (a maximum of 3 students can form a group) . The research could focus on one or more of the qualitative and quantitative methodologies (of a combination of methods – multi method research) introduced in Research Design, Principles of Epidemiology, Basics of Biostatistics, and Qualitative Health Research. The course gives the student a chance to apply background knowledge and master research skills in an area of interest.

General Objectives

In this course, students develop and implement a research project.

Specific learning outcomes

By the end of the course, students should be able to:

- ✓ Choose an appropriate research methodology for the research question of interest
- ✓ Develop data collection tools, and collect the data needed for the study
- ✓ Analyze the data collected
- ✓ Apply ethical principles to the collection, maintenance, use, and dissemination of findings.
- ✓ Write a rigorous research report (see guidelines on next page)

Guidelines for Writing a Research Project Report Using Quantitative Methods

September 2009

Main components of the Research Report:

- I. **A title page** that includes title of project, names of students and advisors.
 - II. **Abstract:** A structured abstract of no more than 300 words which includes: Background, objective, methods, results, and conclusions.
 - III. **Introduction and problem statement:**
 - ✓ Present a clear brief statement of the problem. The research problem is stated in the context of an established theory or general observations, or broad statements from the literature. The problem statement should include population of interest, variables and relationships
 - ✓ Discuss the origin of the general problem (unanswered problem? Inconsistent findings?) and describe its significance.
 - IV. **Research Question:** State clearly and accurately the main question your research project aims to answer
 - V. **Literature Review:** This part could be either integrated with the introduction or stand as a separate component. In this section, you should demonstrate how your study builds on prior knowledge by presenting and evaluating what is already known about your research problem. There should be a critical analysis of the literature rather than summarizing it. It should be well referenced.
- The goal of the introduction and literature review is to demonstrate "the logical continuity between previous and present work" (APA, 1994, p. 11).¹***
- VI. **Objectives / Hypotheses if any:** State clearly the objectives of your research project and any hypotheses you may have.
 - VII. **Methodology includes:**
 - ✓ *Study Design:* The design of the study, whether it is a cross sectional survey, a case control study, a randomized intervention, etc. Justify why you used a particular design.
 - ✓ *Study population, including sample design:* Describe the population you researched, report inclusion and exclusion criteria. Elaborate on how you accessed your population, the sampling frame used, the sampling selection methods (probability vs. non probability sampling, simple random sample, stratified...).
 - ✓ *Measures (conceptual and operational measures):* Operational definitions are described. Clarify the way in which observations were translated into variables and indicators. You can include the specific questions that were asked as measures of each variable in the theoretical model. Define dependent, independent and confounding variables if relevant.
 - ✓ *Procedures:* present a summary of the various steps in the conduct of the research. Training of interviewers, contacting respondents, collecting the data, etc

¹ American Psychological Association (1994). *Publication Manual of the American Psychological Association* (4th ed.). Washington, DC

- ✓ *Data analysis*: Describe the analysis performed (descriptive vs. analytical, type of statistical tests, significance levels, measures of associations). Details could be added about data handling and management. This section should be specific to the data collected and not a generic paragraph.
- ✓ *Ethical Issues*²: You must address ethical considerations (for example *Privacy, confidentiality, harm and benefit of research participants.*) when your research involves primary or secondary data from human subjects. Report if proposal was submitted to the Institutional Review Board (IRB). Whenever relevant describe the content of the Informed consent.³
- ✓ *The Role of researcher[s]* : who they were and how they divided the research activities amongst them in the duration of the research project.

The methodology section should be described in sufficient details for clear understanding and replication of the study

- VIII. **Results**: include findings relating to your research questions. Point to **salient aspects** of the tables, graphs, or other forms of analysis you present and do not repeat the results. Take the research hypotheses one by one, stating each specific finding and supporting it with one or more tables, detailing the evidence. Do not discuss your findings in this section.
- IX. **Discussion of results**: Reflect on the implications of your findings for the research questions that have driven your research; in other words, how do your results illuminate your research questions or answer your hypotheses? It may start or end with a brief summary reviewing the highlights of the report. It is a place to point out the limitations of the research, inconsistencies, account for anomalies, and suggest improvement in the study design. It allows the students to place the whole project into broader perspective, to mention the theoretical and practical implications of the study and discuss possible future work.
- X. **Conclusions and recommendations**: State the main message of the study. What did the study add? Clarify the implications of your findings and suggest ways in which your findings have implications for research, policy, and practice in the field of Public Health
- XI. References**
- XII. **Appendix**: which includes the survey instrument, Informed consent and other ESSENTIAL documents that you perceive important in the evaluation of your project.

Style of the report

- ✓ Length: 10-20 typewritten pages including references
- ✓ Double Spaced, Times New Romans 12, 1.5 inch line spacing, and 1 inch margins
- ✓ References: APA style
- ✓ Your introduction, literature review, Discussion and conclusions should be written in present tense. Your methods and results in past tense.

² For more information on ethical issues refer to the Belmont Report <http://ohsr.od.nih.gov/guidelines/belmont.html>

³ See IRB submission or exemption form on <http://www.aub.edu.lb/ogc/Pages/forms.aspx>