

FPM 280B: Health Behavior Practicum: Data Analysis-- Winter 2016

Instructors: Greg Norman & Eileen Pitpitan

MTF 274

Tuesdays 5:00-9:00pm

Overview:

This course is designed to assist students as they work with their mentor to analyze a dataset identified by the mentor. The goal is to develop an analysis that can lead to a future publication.

Class format:

Students must complete procedures necessary to obtain access to mentor's suggested dataset prior to the start of class. Weekly meetings are held with both mentor and with practicum class. During the practicum class students will present current state of analysis of dataset.

Course objectives:

1. Demonstrate competency in obtaining and using a study dataset
 - a. Conduct checks on data to ensure quality and that dataset is "clean"
 - b. Identify missing data issues
2. Work with mentor to develop testable hypotheses related to a health behavior or health behavior intervention in the study
3. Develop an analysis plan to address hypotheses
 - a. Demonstrate that assumptions of statistical models are understood and are appropriate for the dataset
4. Demonstrate competency in using appropriate statistical software package to undertake standard statistical tests
5. Undertake appropriate analyses to demonstrate that model assumptions are met
6. Demonstrate an ability to summarize and present results from statistical analyses
7. Demonstrate ability to critically discuss scientific methods and statistical analyses during class discussions.
8. Provide constructive feedback to peers about their projects during class discussions.

Course assessments:

1. *Four class presentations (15% each = 60% total):* 1) Dataset and general descriptors, 2) Research questions, 3) Analysis plan, 4) Analytic results
2. *One writing assignment (25%):* Analysis plan – this should follow the format for inclusion in a peer-reviewed journal article (an example will be shared and discussed in Week 3).
3. *Class participation (15%):* Class attendance is required (0.5% for attending each of the 10 classes = 5% total), and during class students are strongly encouraged to learn from others' feedback and provide feedback on other students' analyses (10%).

Class readings:

1. CONSORT statement (methods and results specifically) on reporting randomized trial data. Available here: <http://www.consort-statement.org/home/>

	Classwork	Assignment	Due
Week 1 Jan 5	Introduction to class goals "Thinking about data and analyses strategies..."	Students should come to this class with a dataset already identified. Use preferred program to prepare general descriptors from data set	--Week 2
Week 2 Jan 12	Student Presentations of general descriptors from data set What are research questions that can be addressed by the database?	Develop 3 Research Questions from Dataset	Week 3
Week 3 Jan 19	Student Presentations of Research Questions Writing an analysis plan.	First draft of formal analysis plan of Research Questions	Week 4
Week 4 Jan 26	Student Presentations of Analysis Plan	--Revise Analysis Plan	-Week 5-
Week 5 Feb 2	Mid-quarter course evaluation Conducting and writing peer-reviews		

	Classwork	Assignment	Due
Week 6 Feb 9	One-on-one review of computer programs Review of standard statistical techniques proposed in Analyses plans	Begin analyses on Research Question 1. Present first draft	Week 7
Week 7 Feb 16	One-on-one review of analyses Review of Standard Statistical Techniques proposed in analyses plans	Continue Analyses on Research Questions	Week 8
Week 8 Feb 23	One-on-one review of analyses Review of Standard Statistical Techniques proposed in Analyses plans	Continue analyses on Research Questions	Week 9
Week 9 Mar 1	Student Presentations of Analytic Results	Revisions to analysis based on feedback	--
Week 10 Mar 8	Student Presentations of Analytic Results	Revisions to analysis based on feedback	--