FPM 280B/ FMPH 291: Health Behavior & Global Health Practicum: Data Analysis -- Winter 2022
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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.
    1. Conduct checks on data to ensure quality and that dataset is "clean."
    2. 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 (informal), 2) Research questions (PowerPoint), 3) Analysis plan (PowerPoint), 4) Analytic results (PowerPoint). **PowerPoint presentations must be emailed to both the instructors before class.**
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/
2. Other required or optional readings designed to supplement instructor presentations may be assigned throughout the course at the instructors' discretion. Any readings will be announced in class and distributed to students electronically.

	Classwork	Assignment	Due
Week 1 Jan 4	Introduction to class goals Instructor presentation: *Thinking about data and analyses strategies*	Students should come to this class with a dataset identified. Use preferred program to prepare general descriptors from data set.	Week 2
Week 2 Jan 11	**Student Presentations #1: Data set and general descriptors from data set** Instructor presentation: *Developing your research question*	Develop 3 Research Questions from Dataset (PowerPoint presentation)	Week 3
Week 3 Jan 18	**Student Presentations #2: Research Questions** Instructor presentation: *Writing an analysis plan*	***Writing assignment:*** First draft of formal analysis plan of research questions. (Prepare document and PowerPoint presentation)	Week 4
Week 4 Jan 25	**Student Presentations #3: Analysis Plan**	Revise Analysis Plan	Week 6
Week 5 Feb 1	Mid-quarter course evaluation Instructor presentation: *Mediation and Moderation analyses*		
Week 6 Feb 8	One-on-one review of computer programs Instructor presentation: *Review of standard statistical techniques proposed in Analyses plans*	Begin analyses on Research Questions. Present first draft (informal).	Week 7
Week 7 Feb 15	Class discussion and one-on-one review of analyses Instructor presentation: *Statistical Power Analysis*	Continue Analyses on Research Questions	Week 8
Week 8 Feb 22	Class discussion and one-on-one review of analyses Instructor presentation: *Social Network Analysis*	Continue analyses on Research Questions	Week 9
Week 9 Mar 1	**Student Presentations #4: Analytic Results**	Send final PowerPoint (revise based on feedback if needed)	
Week 10 Mar 8 *(if necessary)*	**Student Presentations #4: Analytic Results**		