From:	Hudes, Estie
Sent:	Monday, March 21, 2016 8:12 AM
To:	'Biostat listserv'
Subject:	Meta-Analysis Workshop with Drs. Johnson & Huedo-Medina of UConn; (CAPS Methods Core / TAPS event); April 19&20; 9:30am-4pm

To CAPS Methods Core seminar participants,

We have an exciting program next month. It is a 2-day workshop on the topic of meta-analysis. This is a joint TAPS and CAPS Methods Core event.

Please be advised that space is limited, and priority for attending will be given to CAPS scientists.

Please RSVP to Estie Hudes by March 31, 2016, and specify your affiliation. Also specify if you plan to attend both days, or Day One only.

Please note that although the abstract below only mention the R package, the workshop leaders will also mention alternative frameworks such as SAS, SPSS, and Stata. More information will be given later to participants.

Title: META-ANALYSIS:
            METHODOLOGY, STATISTICAL MODELS, AND HIV/AIDS APPLICATIONS
            Day One: The Process of Meta-Analysis
            Day Two: Analyses in Meta-Analysis

Leaders: Blair T. Johnson and Tania B. Huedo-Medina
            University of Connecticut

Time & Place: Tuesday April 19, 2015; 9:30-noon and 1:30-4
                 & Wednesday April 20; 9:30-noon and 1:30-4
                 McKusick Conference Room, MH-3700
                 Mission Hall, 3rd floor
                 4th Street at 550 16th Street
                 San Francisco, CA 94158

Abstract:
Progress in science hinges not just on systematic observations of a phenomenon but also on replication of those observations by independent parties. In recent decades, the numbers of studies on seemingly every topic has increased exponentially, including aspects of HIV/AIDS, with proportionally greater difficulty in discerning trends in the results of the studies. Accompanying the surge in empirical research, consensus emerged that reviews of scientific literature are themselves based on methods that ought themselves to be replicable, in theory, and the result has been increasingly rigorous methods for systematic reviews and quantitative integration of study results, otherwise known as meta-analysis. Consequently, meta-analyses are increasingly indispensable in practically every scientific domain to provide a clear picture of what is known about particular phenomena.

The aims of this training workshop are to provide basic competency in conducting meta-analyses as well as the ability to critique meta-analyses and systematic reviews. The process of meta-analysis can be broken into 8 steps: (1) defining the

phenomenon to study; (2) defining the meta-analysis to address the phenomenon; (3) systematic literature searches; (4) study coding; (5) effect size calculations; (6) analyses; (7) dissemination of the meta-analysis; and (8) critiques and re-analyses. Day One will provide an overview of the entire process and Day Two will focus on analyses, elaborating on the earlier material.

This workshop is a comprehensive introduction to meta-analysis and those advanced statistical methods that have been developed recently in meta-analysis. Sessions will be interactive, including not only lectures but also thought experiments, discussion, and spontaneous question-answer sessions. Examples presented will draw from many meta-analyses, many of which focused on HIV prevention or AIDS care. At the end of the two days, you will have the basics to conduct your own meta-analysis, know where to go for further instruction and other resources, and to run basic meta-analytic commands under different statistical approaches that can capture and test complex models.

Participants who register in advance will be provided (1) readings covering the process of meta-analysis itself and providing some example meta-analyses centered on HIV prevention and AIDS care; (2) a set of notes with presentation slides, software input and output; and (3) Excel tools and templates to help complete steps in the meta-analytic process.

Narrative Review vs. Meta-Analysis vs. Systematic Review (and Others) - Defining the phenomenon to study - Literature searches - Study coding - Calculating effect sizes - Introduction to analyses - Dissemination of the meta-analysis - Critiques and re-analyses

The second day will include more advanced methods for meta-analysis integrating certain types of designs. We will go through applications using R to review different approaches conceptually and practically. Required: Computer with R and RStudio installed, including the metafor package (we will discuss these on Day One).

- Models with fixed- vs. random-effects assumptions - Meta-regression and sub-group analysis - Multiple moderator models and the moving constant technique - Single-case design meta-analysis - Network meta-analysis - Individual participant data meta-analysis vs. aggregate-level meta-analysis - Examples

Brief Biographies:

Since the mid-1990s, Blair T. Johnson has focused his scholarship on health promotion and especially HIV prevention, serving as the principal investigator of several NIH grants on these subjects. His recent scholarship has helped to highlight the prominent roles that networks and community resources play in the success of behavioral interventions targeting HIV risk.
Johnson is a prominent methodologist, especially in relation to meta-analysis, which he has dubbed "the Original Big Data." He developed some of the first computer software to conduct meta-analysis and writes treatises on best practices and techniques in meta-analysis. Recent methodological works have focused on how best to incorporate studies' methodological quality in meta-analytic analyses, how to evaluate spatial-temporal aspects in meta-analysis, and describing the quality of meta-analyses having to do with the effects of exercise on blood pressure. His Google Scholar page is here: http://bit.ly/1b5BSyi He is a current Associate Editor with Psychological Bulletin and a Senior Editor with Social Sciences & Medicine. Johnson is a Board of Trustees Distinguished Professor of Psychological Sciences at the University of Connecticut.

Tania B. Huedo-Medina has a broad background in statistics using general linear models and latent variable analysis for cross-sectional, longitudinal, and meta-analytic studies with randomized control trials or observational studies. She is an expert in the use of Monte Carlo techniques to test the mathematical assumptions of statistical models specifically for meta-analysis by simulating a wide range of data under many possible conditions.
In addition to collaborating on many primary-level studies involving multi-level analysis, moderation and mediation, mixed-effects modeling, and structural equation modeling of clinical data, she has also conducted many meta-analyses applied to HIV prevention programs, blood pressure and cardiovascular risk, sleep and mood

disorders, medication adherence, exercise interventions, obesity, nutrition, among others. Mainly these investigations focus on behavioral data and, on some occasions, biological markers and environmental factors. Huedo-Medina has been involved with multiple NIH grants.

Her Google Scholar page is here: http://bit.ly/1SoiCFv Huedo-Medina is an Assistant Professor of Biostatistics in the Department of Allied Health Sciences at the University of Connecticut.

Hope to see many of you at the workshop.

--Estie Hudes

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The CAPS Methods Core activity now be checked directly on the website:
http://caps.ucsf.edu/about/structure-cores/methods-core/

Materials from past Methods Core seminars can be found at
http://caps.ucsf.edu/about/structure-cores/methods-core/methods-core-seminars/

Directions to Mission Bay:
http://campuslifeservices.ucsf.edu/transportation/services/alternative_transportation/mission_bay_transit_options
Please note that you can only use the Red shuttle at 16th Street BART if you have a current UCSF ID badge,

Parking at Mission Bay:
http://campuslifeservices.ucsf.edu/transportation/services/parking/public_parking

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