



JOHNS HOPKINS
BLOOMBERG
SCHOOL of PUBLIC HEALTH

Department of Biostatistics

BIostatISTICS SEMINAR

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Abstract:

Mobile devices along with wearable sensors facilitate our ability to deliver supportive treatments anytime and anywhere. A critical question in the optimization of mobile health interventions is: "When and in which contexts, is it most useful to deliver treatments to the user?" This question concerns time-varying dynamic moderation by the context (location, stress, time of day, mood, ambient noise, etc.) of the effectiveness of the treatments on user behavior. In this talk we discuss the micro-randomized trial design and associated data analyses for use in assessing moderation. Considerations of causal inference and potential causal bias incurred by inappropriate data analyses play a large role throughout. We illustrate this approach with the micro-randomized trial of HeartSteps, a physical activity mobile intervention.

Johns Hopkins Bloomberg School of Public Health, Department of Biostatistics
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