

# Advanced Training Institute on Health Behavior Theory

## Brief Course Description

This training institute will examine theories designed to explain and predict preventive health and screening behaviors. It will pay particular attention to the individual level of analysis. Although this institute will describe several representative theories, the focus will be on the proper use of theories and theory testing, rather than on a comprehensive review or evaluation of current theories. Prerequisites for the course include one graduate-level course in behavioral science, and one graduate-level course in statistics.

Topics	Exercises
1. Faculty introductions	Each faculty person talks a bit about his or her background: <ul style="list-style-type: none"> <li>• How we got where we are</li> <li>• First independent success</li> <li>• One personal thing</li> </ul>
2. Participant introductions	Participants break into dyads: <ul style="list-style-type: none"> <li>• Each person takes 3 minutes to talk about himself or herself</li> <li>• Two dyads get together and introduce themselves to one another</li> </ul>
3. General overview of institute's goals <ul style="list-style-type: none"> <li>• Feedback about participants' interests and expectations</li> <li>• Overview of institute's content and process and how it addresses people's interests and expectations</li> </ul>	None
4. Brief description of logistical issues	
5. Dinner and socializing	

<b>Part One: Fundamental Issues</b>	
<b>Topics</b>	<b>Exercises</b>
1. Ice-breaker exercise	Public service announcement exercise
2. Usefulness of theory <ul style="list-style-type: none"> <li>• What is wrong with the current state of theory?               <ul style="list-style-type: none"> <li>○ Discuss limited value of kitchen-sink interventions</li> </ul> </li> <li>• Faculty panel/testimonials about what is “right” with theory               <ul style="list-style-type: none"> <li>○ Theories help us predict and explain</li> <li>○ Theories help us identify causal relationships</li> <li>○ Interventions should be based on explicit, testable theories rather than on unacknowledged hunches and implicit theories</li> <li>○ Theory-based interventions are easier to compare</li> </ul> </li> </ul>	
3. Basic terminology and concepts: What is a theory? <ul style="list-style-type: none"> <li>• Compare “theory,” “model,” “conceptual framework,” and “theoretical construct”</li> <li>• Contrast “comprehensive” theories that attempt to identify all proximate influences on behavior with more limited theories that only describe the causal relationship between two constructs</li> <li>• Theories need to be seen as ideas that evolve as we learn more, not as fixed sets of rules</li> <li>• Are today’s theories just a menu from which to choose? Is there a correct theory?</li> <li>• What constitutes an adequate description of a theory? Constructs, combinatorial rules, and range of applicability</li> </ul>	Read and compare two different descriptions of the same theory.
4. Theories can operate at different levels of analysis <ul style="list-style-type: none"> <li>• How do behavior scientists define and explain behavior?</li> <li>• Do behavioral scientists explain behavior differently than others?               <ul style="list-style-type: none"> <li>○ Other scientists?</li> <li>○ Other professionals?</li> <li>○ Lay persons?</li> <li>○ Persons engaging in the behavior?</li> </ul> </li> <li>• Levels of influence and levels of interventions               <ul style="list-style-type: none"> <li>○ Possible levels of influence</li> <li>○ Relationships among levels</li> <li>○ Possible levels of intervention</li> <li>○ Relationships among levels</li> <li>○ Application to obesity causes and interventions                   <ul style="list-style-type: none"> <li>a. Intraindividual (coping strategy)</li> <li>b. Interpersonal (role models)</li> <li>c. Social (advertising)</li> <li>d. Political (school funding and corporate sponsorship)</li> </ul> </li> </ul> </li> </ul>	Krispy Kreme doughnut exercise  Describe two theories that deal with different levels of analysis of smoking behavior. What interventions do they suggest?

<b>Part One: Fundamental Issues</b>	
<b>Topics</b>	<b>Exercises</b>
<ul style="list-style-type: none"> <li>• Multi-level models                             <ul style="list-style-type: none"> <li>○ Different levels are not necessarily distinct and can be integrated in a single model</li> <li>○ Structural models – linking levels statistically</li> <li>○ Ecological models – linking levels conceptually</li> <li>○ Can and should theories try to “cover it all?”</li> </ul> </li> </ul>	
<p>5. The challenge of generalization: Theories and problems in context</p> <ul style="list-style-type: none"> <li>• Should the primary goal be to develop a broadly applicable theory or a set of context-specific theories?</li> <li>• How should theories deal with potentially important differences among:                             <ul style="list-style-type: none"> <li>○ Health hazards</li> <li>○ Health behaviors</li> <li>○ Populations</li> <li>○ Environments</li> </ul> </li> </ul>	<p>Read article on hazard attributes that influence risk perceptions.</p> <p>Read article on health behavior in different populations.</p>

<b>Part Two: Current Theories and Types of Theories</b>	
<b>Topics</b>	<b>Exercises</b>
<p>1. Introduction</p> <ul style="list-style-type: none"> <li>• The ebb and flow of theories – the effects of history and scientific questioning                             <ul style="list-style-type: none"> <li>○ Example of history: The authoritarian personality (or computer analogies)</li> <li>○ Example of scientific questioning: Social facilitation (or Risky Shift/Group Polarization)</li> </ul> </li> <li>• Possible taxonomies                             <ul style="list-style-type: none"> <li>○ By grand schools of thought</li> <li>○ By disciplines</li> <li>○ By levels of analysis</li> </ul> </li> <li>• Asking important questions as an organizing strategy</li> </ul>	
<p>2. Question 1: How do people make decisions about health behaviors? Rational view of human decision-making</p> <ul style="list-style-type: none"> <li>• Subjective expected utility theory</li> <li>• Expectancy theory (TRA/TPB/HBM)</li> <li>• Bounded rationality view of human decision-making                             <ul style="list-style-type: none"> <li>○ Heuristics (not all hazards and risks are equal)</li> <li>○ Adaptive toolbox</li> </ul> </li> <li>• Rationalizing – cognitive dissonance</li> </ul>	<p>Exercise on development of a measure of TRA components to illustrate operationalizations of constructs vs. how a person might really make a decision – how well do the constructs fit?</p>
<p>3. Question 2: How does social influence affect health behaviors?</p> <ul style="list-style-type: none"> <li>• Examples of routes at the individual level (modeling, reinforcement, social comparison)</li> <li>• Examples of routes at the group level (social norms and their development, social facilitation or group</li> </ul>	

<b>Part Two: Current Theories and Types of Theories</b>	
<b>Topics</b>	<b>Exercises</b>
polarization)	
4. Question 3: Are behaviors transmitted across individuals or groups? <ul style="list-style-type: none"> <li>• Diffusion theory</li> <li>• Social network analysis</li> </ul>	
5. Question 4: Is behavioral change incremental? <ul style="list-style-type: none"> <li>• Precaution adoption model</li> <li>• Transtheoretical model</li> </ul>	Apply precaution adoption model to target behavior.

<b>Part Three: Theory Components</b>	
<b>Topics</b>	<b>Exercises</b>
1. Constructs as the building blocks of theory <ul style="list-style-type: none"> <li>• Provide overview/discussion of the following: constructs, operational definitions, variables</li> <li>• Focus is on the importance of having clearly articulated and measurable constructs for theory development, testing, and cross-theory comparisons</li> </ul>	
2. Constructs relevant to health behavior <ul style="list-style-type: none"> <li>• Overview of the many types of constructs that influence health behaviors:               <ul style="list-style-type: none"> <li>○ Behavioral (tobacco, diet, etc.)</li> <li>○ Biological (addiction, disability)</li> <li>○ Motivational (intrinsic/extrinsic)</li> <li>○ Beliefs/attitudes/values (risk perception, self-efficacy/perceived control, knowledge)</li> <li>○ Affective (fear/worry, perceived stress)</li> <li>○ Personality (self-esteem, sensation seeking)</li> <li>○ Skills/coping constructs</li> <li>○ Interpersonal (social support, doctor-patient relationship)</li> <li>○ Societal (social norms for drinking, smoking, exercise)</li> <li>○ Environmental (access, barriers)</li> </ul> </li> <li>• Presentations on 4-6 constructs from the preceding list:               <ul style="list-style-type: none"> <li>○ Definition, potential role in health behavior, measurement. If modifiable provide example of method to change if time permits, consider: alternative definitions and conceptualizations, alternative measurements</li> </ul> </li> </ul>	<p>“Construct debate”</p> <p>Following these presentations, each person lists at least one construct from each category relevant to their primary behavior of interest. In small groups, discuss these lists.</p>
3. Defining and measuring construct-related variables <ul style="list-style-type: none"> <li>• How are scales created?</li> <li>• How are measures validated?</li> <li>• Compare different measures of the same construct</li> <li>• Pros and cons of using factor analysis to identify</li> </ul>	Scale development and testing

<b>Part Four: Theory Testing</b>	
<b>Topics</b>	<b>Exercises</b>
<p>1. Does the study test the theory?</p> <ul style="list-style-type: none"> <li>• Provide a general overview of how to think about the links between a theory and a research study. Emphasis will be placed both on generating those links and on identifying and evaluating the links asserted by other investigators</li> <li>    --Discuss the relative merits of cross-sectional and prospective designs</li> <li>• Discuss the distinction between testing a theory and testing a specific prediction derived from an aspect of a theory</li> </ul>	<p>In class, students will review the strengths and weaknesses of different research initiatives designed to test a particular theory.</p>
<p>2. Mediators and moderators</p> <ul style="list-style-type: none"> <li>• Review the distinction between mediators and moderators and discuss the specific role that each class of constructs plays in theory testing</li> <li>• Discuss how theories can be tested across behaviors, populations, and context and how such activities can be used to identify the scope or reach of a particular theory</li> </ul>	<p>In class, students would identify relevant mediators and moderators for a particular theory.</p> <p>In small groups, students develop strategies and specify models to test theory-based predictions regarding mediator and moderator effects.</p>
<p>3. Testing theories and research designs</p> <ul style="list-style-type: none"> <li>• Discuss the differences between evaluation, association, causation, and internal validity</li> <li>• Discuss the advantages and disadvantages of using experimental and non-experimental designs</li> <li>• Discuss the challenges posed by manipulating constructs and the importance of assessing its implementation and impact</li> <li>• Discuss how to formulate and test predictions derived from competing theories</li> </ul>	<p>In small groups, students are assigned data sets and a theory and are instructed to develop and implement an analysis plan to test predictions derived from the theory.</p>
<p>4. Research Programs</p> <ul style="list-style-type: none"> <li>• How does one approach testing theories across a series of studies?</li> <li>• Discuss strategies for how to evaluate and respond to empirical findings: What is the role for post-hoc hypothesis testing? How should one respond to negative evidence or partial support for one's hypotheses? How does one determine what the next step in the research program should be?</li> <li>• How do theories get modified or rejected?</li> </ul>	<p>In small groups, students review a study's findings and formulate a research plan that builds on and responds to those findings.</p>

<b>Part Five: Application of Theory to Health Behavior Change Interventions</b>	
<b>Topics</b>	<b>Exercises</b>
1. Levels and types of interventions <ul style="list-style-type: none"> <li>• Clinical-public health intervention continuum</li> <li>• Levels of intervention from the social ecological perspective</li> <li>• Role of theory in health behavior interventions</li> </ul>	
2. Creating a theory-driven conceptual framework for intervention development <ul style="list-style-type: none"> <li>• Limitations of “black box” intervention development</li> <li>• Working with “boxes” and “arrows” to create a conceptually-based logic model</li> <li>• Examples from funded grant proposals</li> </ul>	Constructing an intervention model – bicycle helmets
3. Using qualitative methods to refine intervention model and components <ul style="list-style-type: none"> <li>• Assuring cultural relevance</li> <li>• Strategic use of focus groups and concept mapping</li> <li>• Effective use of community advisory boards</li> </ul>	Mock focus group
4. Research designs for evaluating theory-based interventions <ul style="list-style-type: none"> <li>• Randomized trials               <ul style="list-style-type: none"> <li>○ “Horserace studies,” factorial designs, usual-care and no-treatment control groups</li> </ul> </li> <li>• Non-randomized designs               <ul style="list-style-type: none"> <li>○ Multiple baseline, historical controls, etc.</li> </ul> </li> <li>• Process and outcome evaluation goals</li> <li>• Writing a PHS398 form methods section for evaluating an intervention</li> </ul>	Mock grant review