THEORIES OF BEHAVIOR CHANGE AND THEIR APPLICATION IN NUTRITION AND PUBLIC HEALTH INTERVENTIONS

Master of Nutrition Science and Policy, Blended Learning Program
Friedman School of Nutrition Science and Policy
Tufts University

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(21st January 2016 – 1st May 2016)

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Credit: 1.0

Description and Goals
The goal of this course is to explore the some of the theories of behavior change most commonly used in nutrition and public health. This course will be conducted, to the greatest extent possible, in a workshop format rather than in lecture format because theories are best learned through discussion, application, and experience. Where appropriate, students will explore (through readings, discussion, and activities) various perspectives as they relate the theories to examples and case studies. We will generally cover one theory per class session, with a few exceptions. For each class, you will be required to read about the theory and write a brief paper with your thoughts about the theory as it applies to a particular research question, intervention, or public health/nutrition program. Through the discussion of these memos in the online discussion space, we will explore the strengths and limitations of each theory. The final class will include considerations on how to choose and combine theories of behavior change. The final assignment will be short presentations based on a brief final paper in which students will synthesize what they have learned over the semester by applying a theory or theories to their chosen research, intervention, or program and describing how these theories might inform the design of their project.
The course is designed for students preparing for work involving the study of motivations for food intake and physical activity as well as those preparing to work as practitioners in the field implementing programs related to food intake and physical activity. Such professionals will be better prepared to compete for grants, design more effective programs, and work more effectively directly with individuals. In all fields of science, experiments are designed and hypotheses are generated based on theory. Basing your work on theory allows you to test hypotheses and explain changes in the behavior of individuals or populations. Theory can help you make a stronger case to granting agencies. To design sound interventions, behavioral programs, and behavioral research, students need to understand which behavior theories are available, what elements of behavior each theory attempts to explain, and how to apply theory to inform their research and intervention designs. When you are in the fields of public health, community health work, or academia, you will have a greater likelihood of success in your work if you have an understanding of these theories.
Course Objectives/Outcomes
By the end of the course, students will be able to:

- Describe the fundamental features of the major theories related to health behavior change.
- Have a basic understanding of the issues around construct measurement, including reliability and validation.
- Understand how to apply health-related behavior theory to the student’s own research or evaluation-based program intervention of interest.
- Challenge each theory and describe its strengths and limitations in relation to particular research and program delivery contexts.
- Be able to consider the ethical implications of using theory to change human behavior.
- Continually question, in both work and general life, what drives people to do what they do.

Assignments, Exams and Grade Evaluation

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<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>10 weekly memos and responses to comments on them</td>
<td>40%</td>
</tr>
<tr>
<td>Participation in discussions – thoughtful comments on other memos, follow up to continue dialogue</td>
<td>45%</td>
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<tr>
<td>Final 2 page paper and presentation</td>
<td>15%</td>
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</table>

The following guidelines are used in evaluating course performance:

1. Written work will be evaluated on the quality of thought, completeness, originality, adherence to guidelines, and ability to incorporate and communicate ideas and information effectively (see grading criteria for memos below).

2. On-line discussions will be evaluated according to the discussion matrix (see the grading criteria for the discussion below).

3. Overall performance will be evaluated based on adherence to course guidelines, including completing all course readings and completing all other course activities by the deadlines.
Participation Policy
Time extensions, make-up work, and a grade of Incomplete will only be given under the most extreme circumstances. Requests for these items must be made in advance, in writing, to the Dean for Academic Affairs and must have prior approval, in writing, of the academic adviser and the instructor.

Communication Policy
Students should try to seek out information for themselves before contacting the instructor. The answers to your questions may have already been posted by your peers, or by the instructor on the discussion board, which can be found on the Trunk course website. Please use the discussion board to post questions to your fellow students and the instructor about any course-related issues. If you cannot find your answer, contact the faculty via email, phone, or Skype as soon as possible. Please do not wait until the last minute. Since students may not all be in the same time zone, you must give us time to respond to your question. Faculty will respond within 48 hours.

Penalties for late or incomplete assignments
Assignments should be completed according to the instructions provided in the course web site in Trunk and should be completed on time. Assignments turned in past the due date without notifying the instructor in advance will have 10% per day automatically deducted from the grade for the assignment.

Technical Support for Online Courses and Programs @ Friedman

Online course support is provided by Friedman support staff. You can and should contact friedmanonline@tufts.edu for all technical issues, including Trunk, Tufts email, and systems access.

Please do not contact faculty or TAs for technical support.

You should anticipate at least a 6-hour wait (Monday-Friday, 9:00am-5:00pm EST) before hearing back regarding a technical support request, although emails are typically returned in significantly less time.*

Telephone: 617.636.4058 (Jonelle) or 617.636.2415 (Patrick)
Email: friedmanonline@tufts.edu
Skype: FriedmanOnline
Hours: 9:00am - 5:00pm Boston Time, Monday - Friday (FriedmanOnline will check for support tickets on the weekends, but typically will not respond until Monday morning unless it is an emergency).

* When emailing a technical support problem, please include as much information as possible (operating system, browser and version, a detailed description of the problem) and please be specific so we can expedite the troubleshooting process for you. You should only use your Tufts email address when submitting support tickets. If you did not receive a Tufts email, then please use the email account that is associated with your Trunk account.
** Many problems with Trunk are a result of using an unsupported browser. Please make sure you are using an up-to-date version of Firefox or Internet Explorer, especially when using communication and assessment tools within Trunk.

Readings, Activities & Discussions
For the most up-to-date information regarding assigned readings, instructions, and due dates please check your email and/or login to your Trunk course site.

There is a substantial reading load for each session of this course. Often the readings include early articles describing the development of the theories as well as more recent articles showing their application to topics of interest. At other times, the readings will describe conflicting opinions about the validity or usefulness of a theory.


Journal articles for each class will be available in PDF format on the course website on Trunk.

Weekly Memos
It is my belief that the best learning occurs through a continuous dialogue, not the one-way transfer of information from an “expert” to a “student.” As a way of beginning the dialogue, each week you will be required to write a memo, which will be a short reflection paper in which you explore the ideas covered in the week’s readings and how they influence your thinking about a specific research project, intervention, program, or clinical situation, which you will choose after the first class. (You will receive more information about this in the first week.) The reflection can, and in fact should, be short. A couple paragraphs is fine, and it should be no more than one page. It should be informal, but thoughtful. For all weeks you will submit the memo to the instructor by 12:00 AM midnight, EST each Monday (i.e. in the middle of Sunday night). Please see the “Assignments Page” of the course site for the exact due date of each memo.

A shorter, one paragraph summary (bullet points are also acceptable) of the main points from the memo should also be posted to the discussion board each week at the same time that the memo is submitted. These memos will make up the bulk of the writing for this course. There will be no long papers, and in keeping with a dialogical approach to teaching, there will be no exam. However, because these weekly memos form the bulk of the writing for the class, they will be very important. They may also eventually serve as a starting point for writing a grant or project proposal for your own work.

Grading criteria for the memos:

<table>
<thead>
<tr>
<th>Components</th>
<th>Expected Level of Competence</th>
<th>Moving Towards Expected Level of Competence</th>
<th>Below Expected Level of Competence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely submission of assignment</td>
<td>Complete memo on time each week.</td>
<td>Memo is submitted late.</td>
<td>Memo is not submitted.</td>
</tr>
<tr>
<td>Style guidelines</td>
<td>Writing is clear and succinct. Demonstrates</td>
<td>Writing lacks clarity in some places. Flow of ideas</td>
<td>Writing lacks clarity throughout. Flow of ideas</td>
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</tbody>
</table>
Discussion Assignment Grading Criteria
Substantive discussion is a critical element contributing to understanding and integration of the concepts and topics covered in this course. Students are expected to contribute to the discussion by responding to the memos of other students with thoughtful questions, observations, or suggestions for enhancing their application of a theory. They are also expected to engage with other students in ongoing discussion of their own memos. The weekly discussions start on Mondays and remain open until 12 AM (midnight) EST on Fridays (middle of Thursday night). *(Please note that the weekly discussions do not start until after the residency period).*

Below is a rubric that describes how your discussion performance is evaluated:

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Quantity and timeliness of contributions</td>
<td>Frequently reads the messages in the discussion area. Contributes with at least 4 constructive messages each week.</td>
<td>Reads messages in the discussion area a few times per week (e.g. two times per week). Contributes less than 4 constructive messages each week.</td>
<td>Reads messages in the discussion area intermittently (e.g. once per week) and contributes to the discussion only sporadically.</td>
</tr>
<tr>
<td>Quality and relevance of post</td>
<td>Messages are concise, clear, and thoughtful. Messages contribute something original or build upon what has been said; they are not repetitious.</td>
<td>Posts topics that are related to the discussion content, but messages only address peripheral issues. Messages dominated by opinion rather than analysis. Repetition of questions or points made by others.</td>
<td>Posts topics which do not relate to the discussion. Makes, short, irrelevant remarks or responds with minimum effort (e.g. “I agree with Sally”).</td>
</tr>
<tr>
<td>Interaction with others</td>
<td>Questions are raised to stimulate discussion. Encourages a variety of viewpoints. Responds to questions and comments</td>
<td>Participation is evident, but posts do not involve others or encourage others to think critically.</td>
<td>Rarely raises questions to stimulate discussion and rarely responds to the questions and comments raised by others.</td>
</tr>
<tr>
<td>from others. When disagreeing, does so respectfully. Comments are primarily student-to-student with comments and questions to the instructor as necessary.</td>
<td>Comments are predominantly student-to-instructor and are rarely student-to-student. Comments are unconstructive or non-courteous.</td>
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**Final Paper and Presentation**

During the exam period, a final memo (1-2 pages) is due, describing the theory or theories that you are considering applying to your research project or program intervention, and how these theories might inform the design of your project. This memo should be more formally written and include citations and references to class readings. In addition to submitting the final memo, the student will be expected to post a brief (5 minute) presentation summarizing your final memo for the class.

Grading criteria:

- Was able to effectively defend choice of theory or theories
- Was able to synthesize what was learned over the semester
- Formally written with appropriate use of references

I also consider your grade to be part of the dialogue. During weeks 7 and 13, you will be asked to assess your performance in the class, and we will provide feedback.
Course & Assignment Schedule
*This schedule is subject to modification at the instructor’s discretion. Please refer to the Weekly Overviews on Trunk for the very latest information on readings and assignments.

<table>
<thead>
<tr>
<th>Week # - Topic</th>
<th>Dates</th>
<th>Assignments Due</th>
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</thead>
<tbody>
<tr>
<td>1 – What is theory?</td>
<td>21st – 24 January</td>
<td>● Submit a description of a professional behavior change situation in Assignments. DUE by Monday 25 Jan at 12:00 AM midnight EST (in the middle of Sunday night)</td>
</tr>
<tr>
<td>2 – Health Belief Model</td>
<td>25 – 31st January</td>
<td>● Memo #1 DUE by Monday 1st February at 12 AM midnight EST (in the middle of Sunday night)</td>
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<tr>
<td>3- RESIDENCY WEEK (Friday, Saturday, and Sunday; 8 AM – 12:15 PM each day)</td>
<td>1st – 7 February</td>
<td>● Post your final/refined professional situations to the Discussion Forum. DUE by Monday 8 February at 12 AM midnight EST (Sunday night)</td>
</tr>
<tr>
<td>4 - Theory of Planned Behavior/ Theory of Reasoned Action</td>
<td>15 – 21st February</td>
<td>● Memo #2 DUE Monday 15 February at 12 AM midnight EST (Sunday night)</td>
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<tr>
<td>5 – Self-Efficacy</td>
<td>22 – 28 February</td>
<td>● Memo #3 DUE Monday 22 February at midnight EST (Sunday night)</td>
</tr>
<tr>
<td>6 – Trans Theoretical Model/Stages of Change</td>
<td>29 February – 6 March</td>
<td>● Memo #4 DUE Monday 29 February at 12:00 AM midnight EST (Sunday night)</td>
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<tr>
<td>7 – Self Determination Theory and Motivational Interviewing</td>
<td>7 - 13 March</td>
<td>● Memo #5 DUE Monday 7 March at 12:00 AM midnight EST (Sunday night) • Self-assessment DUE Monday 7 March at midnight EST</td>
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<tr>
<td>8 – Social Cognitive Theory</td>
<td>14 - 20 March</td>
<td>● Memo #6 DUE Monday 14 March at 12:00 AM midnight EST (Sunday night)</td>
</tr>
<tr>
<td>9 – Dual-Process Models</td>
<td>21st - 27 March</td>
<td>● Memo #7 DUE Monday 21st March at 12:00 AM midnight EST (Sunday night)</td>
</tr>
<tr>
<td>10 – Behavioral Economics</td>
<td>28 March – 3 April</td>
<td>● Memo #8 DUE Monday 28 March at 12:00 AM midnight EST (Sunday night)</td>
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<td>11 – Social Support/Social</td>
<td>4 - 10 April</td>
<td>● Memo #9 DUE Monday 4 April at</td>
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8
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<thead>
<tr>
<th>Topic</th>
<th>Dates</th>
<th>Due Dates</th>
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<tbody>
<tr>
<td>Networks, Diffusion of Innovations</td>
<td></td>
<td>12:00 AM midnight EST (Sunday night)</td>
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<tr>
<td>12 – Eco-Social Models</td>
<td>11 - 17 April</td>
<td>- Memo #10 DUE Monday 11 April at 12:00 AM midnight EST (Sunday night)</td>
</tr>
<tr>
<td>13 – Using Multiple Theories</td>
<td>18 - 24 April</td>
<td>- Begin work on final papers</td>
</tr>
<tr>
<td>Reading and Examination Period</td>
<td>25 April – 1st May</td>
<td>- Final paper DUE Wednesday 27 April at 5 PM EST (to Assignments)</td>
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<td>- Final presentation DUE Wednesday 27 April at 5 PM EST (to the Discussion Forum)</td>
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<td>- Final self-evaluation DUE Friday 29 April 5 PM EST</td>
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Weekly Readings and Learning Objectives

Week 1: What is Theory?
21st – 24th January

Learning Objectives: Upon completion of this class, students will be able to:

- Navigate the course site and syllabus
- Understand the concept of a behavioral theory and how theory can inform research and practice
- Articulate the difference between a “fixed mindset” and a “growth mindset”

Required Readings:


Week 2: Health Belief Model
25 – 31st January

Learning Objectives: Upon completion of this class, students will be able to:
- Define what a rational actor model is
- Elaborate the concepts of perceived risk, barriers, benefits
- Give examples of cues to action

Required Readings:


Learning Objectives:

- Gain an understanding of measurement issues related to theoretical constructs
- Refine professional situations for application of theory
- Understand how theory relates to personal behaviors and everyday life
- Gain a basic understanding of theory at the individual, organizational, community, and broader levels
Week 4: Theory of Planned Behavior/ Theory of Reasoned Action
15 – 21st February

Learning Objectives: Upon completion of this class, students will be able to:
- Contrast the TRA/TPB with the HBM
- Explain the constructs of behavioral beliefs, normative beliefs, and control beliefs
- Discuss the relationship between intention to act and action

Required Readings:


Week 5: Self-Efficacy
22 – 28 February

Learning Objectives: Upon completion of this class, students will be able to:
- Describe different methods of increasing self-efficacy
- Distinguish self-efficacy from self esteem or self confidence
- Examine the confluence of outcome expectations and self-efficacy in predicting behavior

Required Readings:


Week 6: Transtheoretical Model/Stages of Change  
29 February – 6 March  

Learning Objectives: Upon completion of this class, students will be able to:  
- Describe the different stages of change  
- Describe the processes of change  
- Describe how identifying stages can be used for intervention targeting  
- Explain the non-linear nature of progression through the stages  

Required Readings:  


Week 7: Self Determination Theory and Motivational Interviewing
7 – 13 March

Learning Objectives: Upon completion of this class, students will be able to:
- Understand different levels of internalization of motivation and the influence of external rewards on behavior
- Understand the basic principles of motivational interviewing
- Describe the relationship between the SDT and MI

Required Readings:


Week 8: Social Cognitive Theory
14 – 20 March

Learning Objectives: Upon completion of this class, students will be able to:
- Understand the basics of inter-personal behavioral theory and the influence of the immediate environment on behavior
- Apply the concepts of observational learning and reciprocal determinism
- Describe the place of self-efficacy in the SCT

Required Readings:


Optional Reading:

Additional Assignment Due:
Midterm self-evaluations
Week 9: Dual-Process Models
21st – 27 March

Learning Objectives: Upon completion of this class, students will be able to:
- Explore the role of emotions and the unconscious in determining behavior
- Discuss the strength of habit in determining behavior and the benefits and drawbacks of habit replacement

Required Readings:


Recommended Activity:
Take an Implicit Association Test: https://implicit.harvard.edu/implicit/demo/

Highly Recommended Reading for Nail Biters:
Week 10: Behavioral Economics  
28 March – 3 April

Learning Objectives: Upon completion of this class, students will be able to:
- Understand basic tenets of behavioral economics
- Apply concepts within appropriate individual and group interventions
- Compare and contrast behavioral economics principles with concepts from other theories

Required Readings:


Optional Activity:
View TED talk by Keith Chen: Could your language affect your ability to save money? (http://www.ted.com/talks/keith_chen_could_your_language_affect_your_ability_to_save_mone y.html)
Week 11: Social Support/Social Networks, Diffusion of Innovations
4 – 10 April

Learning Objectives: Upon completion of this class, students will be able to:
- Enumerate the attributes of an innovation that make it more likely to diffuse
- Explain the mechanisms through which social support may influence individual behavior
- Introduce the role of social network characteristics in determining social support, diffusion of behaviors and norms, and social capital

Required Readings:


Week 12: Eco-Social Models
11 – 17 April

Learning Objectives: Upon completion of this class, students will be able to:
- Distinguish between different levels of influence on individual behaviors
- Give examples of ways the community, political, social, and built environment can influence individual behavior
- Discuss potential methods of intervening at each of these levels to change health behavior

Required Readings:


Week: 13 Using Multiple Theories
18 – 24 April

Learning Objectives: Upon completion of this class, students will be able to:
- Synthesize what has been learned and choose the most applicable behavioral theory/ies for a particular public health intervention or research question
- Describe how the concepts might be applied

Required Readings:
Please view the on-line lecture and the examples from previous students.