NUTC 0211 - Theories of Behavior Change and Their Application in Nutrition and Public Health Interventions
SPRING 2021

Class Meetings: Online

Instructor: Daniel Hatfield, PhD
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617.636.0997 (office phone)
DanielPhilipHatfield (Skype)

Instructor Office Hours: Office hours by appointment (Skype or phone)

Teaching Assistant: Thanit Pao Vinitchagoon, MS, RD.
Thanit.vinitchagoon@tufts.edu

TA Office Hours: Office hours by appointment (Zoom or phone)

Semester Hour Units: 3 SHUs

Prerequisites: Graduate standing or instructor consent.

Course Description: For people seeking to build healthier communities, behavioral theories provide valuable frameworks for understanding why people do what they do (or don’t do) and for informing the design and evaluation of programs to promote healthier behaviors. Through readings, discussion, and activities, students will become knowledgeable about the key dimensions of different theories commonly used in nutrition and public health and how those theories can be applied in community practice. We will generally cover one theory per class session, with a few exceptions. Key components of the course include:

- Weekly readings that explain the theories and explore their relationships to nutrition and physical activity behaviors
- Weekly lectures that further explain theories and how they can be applied
- Two short papers (one midway through the course and another at the end of the semester) that explore how a theory relates to a behavior-change situation that one might encounter or has encountered professionally
- Weekly online activity/discussion forums in which students will apply their learning about the theories through activities and small group dialogue

Course Objectives: By the end of the course, students will be able to:

- Describe the fundamental features of the major theories related to health behavior change.
- Analyze how to apply health-related behavioral theory in the design and evaluation of community-based nutrition and physical activity interventions.
- Challenge each theory and describe its strengths and limitations in relation to different contexts where theory-based programs might be delivered.
- Continually question, in both work and general life, what drives people to do what they do.

**Academic Conduct:**  
Each student is responsible for upholding the highest standards of academic integrity, as specified in the Friedman School’s Policies and Procedures manual [Friedman School’s Policies and Procedures Handbook](http://students.tufts.edu/student-affairs/student-life-policies/academic-integrity-policy) and Tufts University policies ([http://students.tufts.edu/student-affairs/student-life-policies/academic-integrity-policy](http://students.tufts.edu/student-affairs/student-life-policies/academic-integrity-policy)). It is the responsibility of each student to understand and comply with these standards, as violations will be sanctioned by penalties ranging from failure on an assignment and the course to dismissal from the school.

**Assessment and Grading:**  
The table below provides an overview of the primary course assignments. The sections that follow provide additional detail.

<table>
<thead>
<tr>
<th>Component</th>
<th>Brief Description</th>
<th>% of grade</th>
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</table>
| **Discussion** | • Students will be organized into small online discussion groups. These groups will engage in discussion each week through forums in Canvas  
• Each week, students will typically complete an interactive activity and then submit a post about their experience; some weeks, they will instead compose an original response to a discussion prompt. After submitting their own post, they will be able to view their classmates’ posts and should respond to at least three of those posts over the week  
• Students will be assessed based on the extent to which their own posts and responses to peers reflect thoughtful completion of the weekly material and sound critical insight about the application of theory | 35% |
| **Quizzes** | • Short online quizzes will be completed at midterm and end of the course  
• Quizzes will test fundamental understanding of concepts addressed in required readings and online lectures. | 25% |
| **Midterm paper** | • This midterm paper (750 words max) will explore the application of one of the behavioral theories from the first part of the course to one of several behavior-change scenario options assigned to the class.  
• This paper should demonstrate strong understanding of the chosen theory and original, critical thinking about how that theory can be applied to promote health behavior change. | 15% |
| **Final paper** | • This final paper (1000 words max) will describe how a specific behavioral theory or theories might inform the design of a program/intervention that is related to their personal or professional experience.  
• This paper should incorporate relevant research evidence and demonstrate sound understanding of theory and synthesis of knowledge from throughout the course. | 25% |

**Discussion**  
It is our belief that the best learning occurs through a continuous dialogue, not the one-way transfer of information from an “expert” to a “student.” Substantive discussion is critical to helping students to understand and integrate the concepts covered in this course.

Students share their ideas each week by participating in the online discussion forums. Most weeks include an activity, such as watching a video clip, interviewing a friend or family member, or posting and reflecting on photos. Other weeks, students will respond to a discussion prompt. Once they have completed their own initial post, students can view their peers’ responses and should reply to at least three peer posts over the week. The discussion forums will open at 12:00 pm EST on Sunday and close at 11:59 pm EST on Friday. The table on the next page provides an overview of how students’ discussion forum posts are evaluated.
Students can also post questions or observations about the overall course material in the general discussion forum, which is ungraded.

**Quizzes**
There will be two multiple-choice quizzes during this course based on the materials presented in the required readings and online lectures. The quizzes are designed to test your ability to apply and integrate the material presented in the class up to that point. Both will be administered online through Canvas and will be available under the Tests & Quizzes link on the course site.

Each quiz will be open for a specified multi-day period, and you may start your quiz at any time during this period. Once you start a quiz, you will have 2 hours to complete it. We have found that most students need less than an hour to complete the quiz and check their answers. Quizzes will be open book and open notes.

<table>
<thead>
<tr>
<th>Component</th>
<th>Expected Level of Competence</th>
<th>Moving Towards Expected Level of Competence</th>
<th>Below Expected Level of Competence</th>
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</thead>
</table>
| Quality and relevance of posts   | - Messages in response to activities/discussion prompts are concise, clear, and reflective of thoughtful completion of readings/lectures.  
- Replies to peers contribute something original or build upon what has been said. | - Ideas only reflect partial completion of the weekly assignments.  
- Posts are dominated by opinion rather than analysis.  
- Replies to peers largely entail repetition of questions or points made by others. | - Posts ideas that do not reflect understanding of the weekly material.  
- Makes, short, irrelevant remarks or responds with minimum effort (e.g., “I agree with Sally”) |
| Quantity and timeliness of contributions | - Frequently reads the messages in the discussion area.  
- Postings are well distributed throughout the week.  
- Responds to at least 3 peer posts each week. | - Reads messages in the discussion area a few times per week (e.g., two times per week).  
- Postings are concentrated during the week (i.e., all within a brief period of time).  
- Contributes fewer than 3 constructive peer replies each week. | - Reads messages in the discussion area intermittently (e.g., once per week) and contributes to the discussion only sporadically. |
| Interaction with others          | - Questions stimulate discussion.  
- Student responds to questions and comments from others and encourages a variety of viewpoints.  
- When disagreeing, student does so respectfully. | - Participation is evident, but posts do not involve others or encourage others to think critically. | - Rarely raises questions to stimulate discussion and rarely responds to the questions and comments raised by others.  
- Comments are unconstructive or discourteous. |
Quiz 1:
- Administered in Week 6
- Will cover material from the start of the course through the end of Week 6

Quiz 2:
- Administered in Week 13
- Will cover material from Week 7 through the end of Week 13

Keep in mind that for each online quiz you will need a good internet connection. Plan accordingly by making sure you can access Canvas at the location you choose to take your quizzes. Some offices and corporations have firewalls that will block a system like Canvas.

After all quizzes have been completed, the instructors will distribute an answer key. If you have questions about the quiz, be sure to first review the answer key. If you still have questions, feel free to contact the TA and instructors.

Midterm Paper
Midway through the course, students will write a short paper (750 words maximum) applying one of the behavioral theories from the first half of the course to a particular behavior-change program/intervention scenario. Students will have the opportunity to choose the behavior-change scenario from several options presented by the course instruction team.

In their paper, students will be expected to:
- Provide a clear, concise, and well-informed rationale for why they chose the theory that they chose for their particular behavior-change scenario.
- Discuss specific approaches they might incorporate into a program or intervention designed to elicit the desired behavior change, mapping those approaches to specific constructs from the chosen theory in ways that reflect sound understanding of those constructs.

Final Paper
On the last day of class, a short final paper (1000 words maximum) is due, describing how a specific behavioral theory or theories might inform the design of a program or intervention of your choice. Students will submit an idea for their chosen program to the instructors in week 11.

The final paper should include:
- A brief background describing the health issue and program/intervention on which you have chosen to focus
- A description of which theory or theories (up to 2) you would choose to use in guiding program/intervention design and why
- Discussion of how you would apply the theory/theories in designing, implementing, and/or evaluating the program
- Citations/references to class readings or other relevant research evidence

Students will be graded based on whether the paper:
- Effectively defends choice of theory or theories
- Demonstrates ability to think critically about behavioral theory
- Is formally written with appropriate use of references

Penalties for late or incomplete assignments
Assignments should be completed according to the instructions provided in the course web site in Canvas and should be completed on time. Assignments turned in or completed past the due date without receiving an extension in advance from the instructors will have 10% per day automatically deducted from the grade for the assignment.
Instructions for Submission of Assignments and Exams: Please see the Course Schedule below and the course website for a list of assignments and due dates. Discussion forums will close on Friday at 12:00 pm EST; late posts will only be accepted under exceptional circumstances, with advanced permission from the instructor. Late papers or quizzes will be penalized per the policy above. Students who are unable to complete a paper or quiz on time should notify the instructor by email prior to the deadline. Extensions will be granted only for exceptional circumstances.

Accommodation of Disabilities: Tufts University is committed to providing equal access and support to all students through the provision of reasonable accommodations so that each student may access their curricula and achieve their personal and academic potential. If you have a disability that requires reasonable accommodations, please contact the Friedman School Assistant Dean of Student Affairs at 617-636-6719 to make arrangements for determination of appropriate accommodations. Please be aware that accommodations cannot be enacted retroactively, making timeliness a critical aspect for their provision.

Technical Support for Online Courses and Programs
Online course support is provided by Friedman support staff and/or IT Support. Please do not contact course instructors or the TAs for technical support.

- Telephone: (617) 627-3376
- Email: it@tufts.edu
- Hours: 24 hours a day, seven days a week.

When reporting a problem, please include:

- The name and number of your course (e.g., "NUTC 211")
- Your operating system and browser
- A detailed description of the problem

This information will expedite the troubleshooting process. If you are sending a support request via email, please use your Tufts email address.

Communication Policy
Students should try to seek out information for themselves before contacting the teaching assistants or instructor. The answers to your questions may have already been posted by your peers or the instructors in the discussion board, which can be found on the Canvas course website. Please use the discussion board to post questions to your fellow students and the teaching assistants and instructors about any course-related issues. If you cannot find your answer, contact the instructor via email or Skype as soon as possible. Please do not wait until the last minute. The instructor will respond within 48 hours.
<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Topic</th>
<th>Lecturer</th>
<th>Assignments Due</th>
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<tbody>
<tr>
<td><strong>Course Topics and Assignment Schedule at a Glance:</strong></td>
<td></td>
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<tr>
<td>Jan 20 - Jan 24</td>
<td>1</td>
<td>Orientation (Part 1) What is theory? (Part 2)</td>
<td>Dan Hatfield</td>
<td>• Post an introduction on the discussion forum</td>
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<td><strong>Individual-Level Health Behavior Theories</strong></td>
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<td>Jan 25 – Jan 31</td>
<td>2</td>
<td>Health Belief Model</td>
<td>Dan Hatfield</td>
<td>• Post response to weekly activity and at least three responses to classmates' posts.</td>
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<td>Feb 1 – Feb 7</td>
<td>3</td>
<td>Theory of Reasoned Action/ Planned Behavior</td>
<td>Dan Hatfield</td>
<td>• Post response to weekly activity and at least three responses to classmates' posts.</td>
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<tr>
<td>Feb 8 – Feb 14</td>
<td>4</td>
<td>Self-efficacy</td>
<td>Dan Hatfield</td>
<td>• Post response to weekly activity and at least three responses to classmates' posts.</td>
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<td>Feb 15 – Feb 21</td>
<td>5</td>
<td>Trans-theoretical Model/Stages of Change</td>
<td>Eleanor Shonkoff</td>
<td>• Post response to weekly activity and at least three responses to classmates' posts.</td>
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</tbody>
</table>
| Feb 22 – Feb 28  | 6    | Self Determination Theory, Motivational Interview | Dan Hatfield            | • Post response to weekly activity and at least three responses to classmates' posts.  
|                  |      |                                                   |                         | **Quiz 1 due**                                                                   |
| Mar 1 – Mar 7    | 7    | Dual-Process Models                               | Sarah Sliwa             | • Post response to weekly activity and at least three responses to classmates' posts.  
|                  |      |                                                   |                         | **Midterm paper due**                                                            |
| Mar 8 – Mar 14   | 8    | Behavioral Economics                             | Dan Hatfield            | • Post response to weekly activity and at least three responses to classmates' posts. |
| **Models of Interpersonal Influences**                                                                                                                                                      |
| Mar 15 – Mar 21  | 9    | Social Cognitive Theory                           | Sarah Sliwa             | • Post response to weekly activity and at least three responses to classmates' posts. |
| Mar 22 – Mar 28  | 10   | Social Support                                    | Sarah Sliwa             | • Post response to weekly activity and at least three responses to classmates' posts. |
| Mar 29 – Apr 4   | 11   | Social Networks                                   | Ariella Korn            | • Post response to weekly activity and at least three responses to classmates' posts. |
| Apr 5 – Apr 11   | 12   | Diffusion of Innovations                          | Dan Hatfield            | • Post response to weekly activity and at least three responses to classmates' posts. |
| **Models of Multilevel Influences**                                                                                                                                                           |
| April 12 – April 18 | 13   | Eco-Social Models                                 | Dan Hatfield            | • Post response to weekly activity and at least three responses to classmates' posts.  
|                  |      |                                                   |                         | **Quiz 2 due**                                                                   |
| Apr 19 – Apr 25  | 14   | Finals week                                       | Dan Hatfield            | • Final paper due                                                                |

* This schedule is subject to modification at the instructors’ discretion.
**Course Topics, Learning Objectives and Assignments**

This schedule is subject to modification at the instructor’s discretion.

**Week 1: Orientation (Part 1) and What is Theory? (Part 2)**

**Learning Objectives:**
Upon completion of this class, students will be able to:
- Identify the goals of the course and expectations for students
- Recognize how the application of behavior change theories can strengthen intervention design
- Explain what defines a behavioral theory
- Summarize how, broadly speaking, theory can inform community practice
- Know the meaning of a behavioral construct

**Lecture:**
Dan Hatfield, PhD

**Required Readings:**

**Assignments:**
- Briefly introduce yourself to your classmates and instructors on the discussion forum in Canvas. We’re especially interested in your personal and professional goals in taking this course, but you’re of course welcome to share any other information that might help your instructors and classmates get to know you better.

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Week 2: Health Belief Model

Learning Objectives:
Upon completion of this class, students will be able to:
• Define a rational actor model
• Explain the concepts of perceived threat, perceived barriers, and perceived benefits
• Describe which HBM constructs tend to be most predictive of health behavior
• Give examples of cues to action
• Describe how and why interventions can be tailored

Lecture:
Dan Hatfield, PhD

Required Readings:


Optional Reading:

Assignments:
• Post response to weekly activity and at least three responses to classmates’ posts.

***
Week 3: Theory of Planned Behavior/ Theory of Reasoned Action

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
• Describe how TRA/TPB might be applied to a community-based communications intervention

Lecture:
Dan Hatfield, PhD

Required Readings:


Assignments:
• Post response to weekly activity and at least three responses to classmates’ posts.

***
Week 4: Self-Efficacy

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
- Give examples of strategies that might build self-efficacy in an intervention setting

Lecture:
Dan Hatfield, PhD

Required Readings:


Assignments:
- Post response to weekly activity and at least three responses to classmates’ posts.

***
**Week 5: Transtheoretical Model/Stages of Change**

**Learning Objectives:**
Upon completion of this class, students will be able to:
- Identify the stages of change and how they differ from one another
- Discuss the processes of change
- Describe how identifying stages can be used for intervention targeting
- Explain the non-linear nature of progression through the stages
- Interpret health communications materials through a TTM lens

**Lecture:**
Eleanor Shonkoff, PhD

**Required Readings:**


**Assignments:**
- Post response to weekly activity and at least three responses to classmates’ posts.

***
**Week 6: Self Determination Theory and Motivational Interviewing**

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

- Enumerate different levels of internalization of motivation and the influence of external rewards on behavior
- Summarize the basic principles of motivational interviewing
- Describe the relationship between the SDT and MI
- Explore applied strategies for using SDT to promote healthy behaviors in the context of a community intervention
- Draw connections between SDT principles and MI approaches
- Distinguish internalized from externalized forms of motivation

**Lecture:**
Dan Hatfield, PhD

**Required Readings:**


**Optional Readings:**
*These readings encourage further thinking about ethical considerations and potential unintended consequences of policy and environmental approaches to address obesity.*


**Assignments:**
- Post response to weekly activity and at least three responses to classmates’ posts.
- Quiz 1 due

***
**Week 7: Dual-Process Models**

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

- Differentiate rational from automatic/emotional processes that shape human behavior
- Examine the role habit plays in determining behavior and the benefits and drawbacks of habit replacement
- Weigh different intervention approaches that account for dual processes
- Identify the limitations of rational actor models

**Lecture:**
Sarah Sliwa, PhD

**Required Readings:**


**Optional Reading:**
Rothman AJ, Sheeran P, Wood W (2009). Reflective and automatic processing in the initiation and maintenance of dietary change. Ann Behav Med 38:S4-S17. [Figure 1 is especially useful]

**Assignments:**
- Post response to weekly activity and at least three responses to classmates’ posts.
- Midterm paper due

***
Week 8: Behavioral Economics

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

Lecture:
Dan Hatfield, PhD

Required Readings:


Optional Reading:


Assignments:
• Post response to weekly activity and at least three responses to classmates’ posts.

***
Week 9: Social Cognitive Theory

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

- Explain the principles of inter-personal behavioral theory and the influence of the immediate environment on behavior
- Describe the place of self-efficacy in the SCT
- Apply the concepts of observational learning and reciprocal determinism to their own and others’ patterns of behavior

**Lecture:**
Sarah Sliwa, PhD

**Required Readings:**


**Optional Reading:**


**Assignments:**
- Post response to weekly activity and at least three responses to classmates’ posts.

***
Week 10: Social Support

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

- Explain the mechanisms through which social support may influence individual behavior
- Identify multiple types of social support
- Describe how social support aligns with several previously discussed theories
- Evaluate opportunities to enable health behavior change by enhancing social support

Lecture:
Sarah Sliwa, PhD

Required Readings:


Assignments:
- Post response to weekly activity and at least three responses to classmates’ posts.
Week 11: Social Networks

Learning Objectives:
Upon completion of this class, students will be able to:
• Describe the role of social network characteristics in determining social support, diffusion of behaviors and norms, and social capital
• Identify potential mechanisms of how social networks might influence health behavior and health outcomes
• Assess how one might consider different social network structures in designing a campaign or group intervention

Lecture:
Ariella Korn, PhD

Required Readings:


Assignments:
• Post response to weekly activity and at least three responses to classmates’ posts.

***
Week 12: Diffusion of Innovations

Learning Objectives:
Upon completion of this class, students will be able to:
• Identify the attributes of an innovation that make it more likely to diffuse
• Describe the innovation-decision process that individuals/groups undergo as they adopt innovations
• Evaluate how characteristics of an innovation, characteristics of adopters within a social system, and characteristics of communication channels influence diffusion
• Compare and contrast elements of the Positive Deviance (PD) approach and Diffusion Theory

Lecture:
Dan Hatfield, PhD

Required Readings:


Assignments:
• Post response to weekly activity and at least three responses to classmates’ posts.

***
**Week 13: Eco-Social Models**

**Learning Objectives:**
Upon completion of this class, students will be able to:
- Distinguish between different levels of influence on individual behaviors
- Describe ways the community, policy, social, and built environment can influence individual behavior
- Discuss potential methods of intervening at each of these levels to change health behavior
- Examine the interactions between influences at different levels of an ecologic framework
- Identify evaluation challenges associated with applications of the eco-social model

**Lecture:**
Dan Hatfield, PhD

**Required Readings:**


**Assignments:**
- Post response to weekly activity and at least three responses to classmates’ posts.
- Quiz 2 due

***