Prevention Science Research: Design and Analysis  
Spring 2011

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<tr>
<th>Time/Location:</th>
<th>Friday 11:30-12:30/205 London</th>
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<tr>
<td>Professor:</td>
<td>Keith Herman, Ph.D.</td>
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<td>Office:</td>
<td>Hill 4B</td>
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Course Description & Objectives

Prevention Science Research is a graduate seminar intended to provide students with the theoretical and empirical foundations of prevention science. In particular, students will learn how to conceptualize problems from a prevention science perspective and design and evaluate preventive interventions using advanced methodologies. Opportunities for community-based participatory research including research design and analyses, papers and briefs, grantwriting, and community collaborations regarding prevention programming particularly pertaining to children's mental health.

As the instructor and seminar leader, I will conduct some didactic instruction (especially during the first few weeks of class). However, this course is a seminar, and you are expected to be a full contributor. Specifically, you are expected to come to each seminar session fully prepared to contribute to the discussions, and you will also be expected to conduct brief formal presentations to the group during the semester. An important aspect of this seminar will be your participation in case presentation discussions and practice activities designed to help students apply the knowledge based of the course.

By the end of the course, each student will be able to:

1. Conceptualize common child mental health problems and social problems from a prevention science perspective.
2. Develop hypotheses consistent with this perspective.
3. Design studies to evaluate preventive interventions.
4. Select appropriate statistical methods for analyzing data consistent with the study design and hypotheses.

My personal goals or hopes for the course are that we:

1. Inspire each other and have stimulating discussions.
2. Work together in designing studies, writing papers, analyzing data.
3. Extend our thinking about prevention theories, research, and interventions applied to each of our specific interests.
4. Chart the future direction of the Missouri Prevention Center and the prevention science course sequence/certificate.
Major Assignments

To successfully complete this course, you will need to complete the following requirements:

**Attendance.** Because this course is a seminar, your attendance and participation are extremely important. Although I do not have a specific grading policy (i.e., maximum number of days missed, etc.), it is worth noting that I expect you to be in attendance except in unusual circumstances, and to be on-time for class. I reserve the right to make reasonable adjustments in final grades if there is a particularly noteworthy problem with attendance.

**Informed and Collegial Participation (25 points).** I will use class-wide and small group discussions and role plays as important parts of the delivery of this course. Thus, you are expected to contribute to the learning of your peers in this seminar and participate in classroom activities.

**Readings.** I have assigned a reading list with an emphasis on recent research in prevention science. Please complete assigned readings prior to the class date each article is assigned.

**Article Selection and Discussion (25 points).** You will identify three articles of your choice related to prevention science methods that are discussed during the class. You will provide a 1 page summary of the article using the format that will be discussed in class. Be prepared to provide a 5-10 minute presentation followed by a 5-10 minute discussion about the articles. Relevant journals include but are not limited to the following: *Development and Psychopathology, Child Development, Prevention Science, Journal of Child Psychology and Psychiatry, Journal of Abnormal Child Psychology, Journal of Positive Behavior Interventions and Supports.*

**Literature Review and Paper Participation (50 points).** Throughout the course you will complete activities that culminate in one or more comprehensive prevention science projects. Your project will be graded on depth and breadth of content coverage, your collegiality in working with others on the project, and overall quality of your work.

**Final Evaluation**

Final grades for this course will be based on the quality of your performance on all the required activities according to the possible points below for each assignment:

- Participation and Attendance 25
- Article Discussion 25
- Final Report and Presentation 50

TOTAL 100
The following percentage criteria (based on how many points you receive out of 100 possible) will be used to determine your final grade:

100-93    A
85-92     B
75-84     C
< 74      no credit

Credit will not be awarded for completion of the course requirements at less than the 75% credit.

**Policy Statements**

In this course, we will explore individual differences in human behavior in their broadest manifestations, as these differences relate to psycho-social problems of children and youth. Some of these areas of individual differences in human diversity will include gender, age, race/ethnicity, socioeconomic status. Other areas may also be covered. This will be a class in which human diversity is an important issue. It is my intent that this course will promote respect for human diversity, as well as open and honest discussions of differing views and respect for various perspectives regarding the subject matter. Please let me know of your suggestions for improving this course and the way in which it is delivered.

**If you have a disability** that causes you to need any academic accommodations for this class, or if you have any conflicts with the course schedule because of your intended observance of a religious holy day, please let me know early in the quarter. If you have special needs as addressed by the Americans with Disabilities Act (ADA) and need assistance, please notify the Office of Disability Services, S5 Memorial Union, 882-4696, or the course instructor immediately. Reasonable efforts will be made to accommodate your special needs.

**Academic honesty** is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person’s work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards academic dishonesty as an extremely serious matter, with serious consequences that range from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, consult the course instructor.

**Goal Setting.** At the beginning of each term you are encouraged to set short and long-term goals that will guide your participation in course activities.

**IRB Compliance Training.** Please complete the IRB compliance training for MU available on-line at your earliest convenience. To complete the compliance training go to the following web-link and log in:
https://irb.missouri.edu/eirb/gen4/User/Login/
Choose “Compliance Training” from the main menu. You are not required to
complete the HIPPA trainings for participation in MPC activities. However, you will need to complete the Educational Training Quiz and print certification of your successful completion before participating in any MPC research activities.

**Reading List**

A reading list has been devised to supplement and enhance your research and professional development experience. Please complete assigned readings prior to the date each article is assigned. Please contribute to the learning of your peers through group discussions. All readings are available on Blackboard.


Bradshaw, C. et al. (2009). Examining the effects of School-Wide Positive Behavior Interventions and Supports on student outcomes: Results from a randomized control effectiveness trial in elementary schools. *Journal of Positive Behavior Interventions*.


Institute of Medicine (IOM) and National Academy of Science Report (2009). *Preventing Mental, Emotional, and Behavioral Disorders Among Young People: Progress and Possibilities*. Chapter 4, Using a Developmental Framework (p. 71-110).


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<th>DATE</th>
<th>TOPIC</th>
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<tr>
<td>1/20</td>
<td>Introduction and Overview</td>
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| 1/27 | Prevention Science Overview  
A Developmental Framework | IOM (2009)  
Shonkoff (2010) |
| 2/3  | Structural Equation Modeling | Herman et al. (2008) |
| 2/10 | Latent Class/Profile Analyses | Reinke et al. (2008) |
| 2/24 | No Class | |
| 3/10 | Parallel and Sequential Analyses | Reinke (2011) |
| 3/17 | Modeling Intervention Effects: FCU Outcomes  
Connell, Bullock, et al. (2008) |
| 3/24 | Modeling Intervention Effects: IY Predictors  
LGM of IY Predictors, Mediators, and Moderators | Beauchaine (2005) |
| 3/31 | No Class: Fall Break | |
| 4/7  | Group Randomized Designs: Overview | Jensen et al. (2006) |
| 4/14 | Multilevel Mixture Modeling  
Communities that Care | Van Horn (2008) |
| 4/21 | Randomized Control Effectiveness Trials  
Triple P Population-Base Prevention Trial  
PBS Effects on Student Outcomes | Bradshaw et al. (2009)  
Prinz et al. (2009) |
| 4/28 | Assault on Science | Friedman (2010)  
Lehrer (2010)  
Eisner (2009) |
| 5/5  | Wrap-Up Review | |