

BBH 502 or Psy 502 - Health - Biobehavioral Perspectives - 2005
 Wednesday 3:00-5:30 pm Room 317 HHD Bldg East.

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The course critically evaluates the use of behavioral science and psychology to (a) promote and maintain health, (b) prevent and treat illness, and (c) describe interrelationships between behavioral and social factors that impact health status. Emphasis is on "physical" rather than "mental" health and illness. Critical evaluation is especially important because advice on applications in this difficult area has often exceeded the database or the conceptual base, sometimes with strikingly ineffective and even counter-productive results.

Broad Objectives:

- 1) To gain experience in the critical evaluation of empirical and conceptual articles in biobehavioral health
- 2) To explore connections between the articles and other issues in the area
- 3) To consider important "next steps" in the research being conducted

Guiding principles:

Graduate students need to develop the ability to (a) read papers largely on their own and basically understand them and evaluate them, and (b) use teams to refine their evaluation. Although lecturing does have its place in many classes, including this one, we intend to largely offer guided practice in learning. Lecturing is planned but will also emerge ad hoc if teams are stymied.

Optional Text Shelley E. Taylor, Health Psychology (5TH OR 6TH Edition), McGraw-Hill. The text provides an overview of this area and allows us to spend class-time discussing more advanced issues.

Also optional: Robert Sapolsky, Why Zebras Don't Get Ulcers Freeman, 2004.

Additional Readings: As assigned below. Please note that readings may be added or substituted and we will provide you as much notice as possible if changes are made to the list of readings.
Readings are available online at the Angel course website, unless otherwise noted.

Evaluation scheme: (exact percentages to be determined by class at first meeting)

Independent Work

- A. Term paper proposal (5 %): By the date noted on the class schedule, upload your proposal to Angel. The document should describe your proposed research topic. Give the following details: what hypothesis (or question) are you trying to support with your review of the literature? What papers have you found? List the bibliographic info for the papers you have gathered so far. We'll be looking to see that you have a well-defined hypothesis for which there is a reasonable set of rigorous studies (8-10 good papers is the target—a question with 40 papers on it is too broad). Your description of the topic should be brief (a page or two) and we may request changes and refinements before it is approved. It is possible to change your topic after we discuss them in class on October 20th, but come with your best idea for a feasible topic with a strong literature base. We encourage you to talk to us and email us before this date to discuss your ideas. **This assignment must be uploaded onto ANGEL. No hard copies or emailed copies will be accepted.**
- B. One 15-20 page, double-spaced, typed paper on a topic **that must be pre-approved by an instructor (30-50 %)**. **This paper must be uploaded onto ANGEL. No hard copies or emailed copies will be accepted. Deadline is shown on the schedule of class meetings. The 2005 class allotted 35% of their grade to the paper.**
- C. 10-15 min (length to be specified) class presentation of term paper (5 %)

In-class (as a team or on your own)

- A. Individual scores on Readiness Assessment Tests (multiple-choice/short-answer) at beginning of class based on assigned readings (10-30%) class selected 10%
- B. Team scores on RAT (5-20%) class selected 20%
- C. Team discussion report---a one to two page outline document summarizing key points arrived at by team by the end of class, can be emailed the next day, 10-20%. Class selected 20%
- D. Teams contribution score as determined anonymously by other team members at the end of the course (5-20%) class selected 10%

Total must equal 100%

Team rules (in brief):

- A. **Size:** at least 4 members, selected by teachers, to balance skills and background as much as possible.
- B. **Leader:** rotates among group alphabetically, leader's job is to keep discussion on task and help see that the group covers the material. Consensus is not required, minority opinions can be represented.
- C. **Scribe:** The person who takes notes and produces the team discussion report –in outline form–to be emailed the next day. Rotates among members (you'll remember).

Sample Team task: Answer questions about specific elements of the readings

- A. Give an explanation for the pattern of data in Line A on Figure 2. (Some of the discussion questions will be given in advance).
- B. Indicate interesting connections between the article and other articles you have read or know about.
- C. Describe the three greatest weaknesses of the paper and explain how these weaknesses might have influenced the results of the paper.
- D. Propose next steps to be taken in research. (What else needs to be known?)

One of the faculty will be shadowing the discussion and participating selectively.

Grades: A = 93-100, A- = 90-92, B+ = 86-89, B = 83-85, B- = 80-82, C+ = 76-79, C = 70-75, D = 60-69, F = Below 60. (Rounding: 0.5 and above).

Statement on Academic Integrity with reference to this course. Academic integrity is the pursuit of scholarly activity free from fraud and deception. Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used or concurrently used in another class without informing the instructor, or tampering with the academic work of other students. Work on the small papers and the final paper for this course should be done independently and should not be the result of discussions with others. The usual punishment for academic dishonesty is an "F" for the course or a lesser penalty if the alleged infraction is of a more minor nature. It is recommended that PSU students visit the following site: Cyber-Plagiarism Site for PSU Students: <http://tlt.its.psu.edu/suggestions/cyberplag/>. The instructors may submit student papers to turnitin.com for verification of originality.

Statement on Disability Services The Pennsylvania State University encourages persons with disabilities to participate in its programs and activities. If you anticipate needing any type of accommodation or have questions about the physical access provided, please contact the Office for Disability Services at (814)863-1807 in advance of your participation or visit.

Statement on Religious Holiday Absence Policy: Faculty and students are reminded of Penn State's policy regarding students' requests for absence from class for the purpose of observing a religious holiday. The University Faculty Senate Policy on Class Attendance (42-27) states that instructors should provide, within reason, opportunity to make up work for students who are obliged to miss classes for legitimate reasons.

As further clarification, Academic Administrative Policy on Religious Holidays (R-4) states that while the University makes every effort to avoid conflicts with religious holidays, when conflicts are unavoidable, the policy is to try and make special arrangements for the student affected. *The Faculty Handbook* says that "Faculty members are encouraged to entertain requests for exemptions from class attendance for purposes of religious observances."

In consultation with campus and community religious leaders, The Center for Ethics and Religious Affairs has compiled a listing of those holy days of the major world religions for which observance may require a student to depart from his or her normal routine at the University. Only those holy days which occur when classes are in session are included. This is not, therefore, an exhaustive list of all major holy days in each religious tradition. The list is available on the Web at <http://www.sa.psu.edu/cera/relhol.html>.

Schedule of class meetings and deadlines for term paper. See below for reading assignments.

Week	Date	Topic
1	8/31	Introductions, ethics, CVD primer
2	9/7	Psychosocial interventions for chronic disease
3	9/14	Prevention paradox
4	9/21	Stress and health
5	9/28	Smoking and Accidents
6	10/5	Diabetes
7	10/12	Estrogen and lipid lowering
--	10/18	***TERM PAPER PROPOSAL SUBMITTED TO ANGEL***
8	10/19	Discuss term paper topics in class
9	10/26	Childhood obesity
10	11/2	Integrating Bio-psycho-social Approaches to Health & Development
11	11/9	Understanding Molecular genetics
12	11/16	Ethnicity and Health
13	11/23	***THANKGIVING BREAK***
14	11/30	Nutrition interventions
--	12/5	***TERM PAPER IS DUE at 4 pm***
15	12/7	Last class: Student Presentations

Week #1 Overview and introductions

- A) Discuss syllabus and course structure.
- B) Review and discuss videos and reading assignment on ethics in science. Reading: Caroline White. "Suspected research fraud: Difficulties of getting at the truth". Available in full text, for free, from BMJ.com.
- C) A primer on cardiovascular disease (Dr. West)

Week #2 Psychosocial interventions for chronic disease. (Dr. Sheila West)

- A) Frasure-Smith et al., (2002). Long-term survival differences among low anxious, high anxious, and repressive copers enrolled in the Montreal heart attack trial. *Psychosomatic Medicine*, 64: 571-579.
- B) Smyth et al (1999). Effects of Writing About Stressful Experiences on Symptom Reduction in Patients With Asthma or Rheumatoid Arthritis, *JAMA*, 281: 1304-1309.
- C) Berkman et al (2003). The writing group from the ENRICHD trial. (2003). *JAMA*.

Week #3 Prevention Paradox and threshold effects (Dr. Lynn Kozlowski)

See Angel for Readings and Study Questions for this class.

- A) Rose, Prevention Paradox, *British Medical Journal*, June 1981.
- B) Law, MR, Wald, NJ Risk factor thresholds: their existence under scrutiny, *BMJ*, 29 June 2002 (Available free from bmj.com).

Week #4 Stress and health. (Dr. Laura Klein)

- A) Taylor, Klein et al. (2000). Biobehavioral Responses to Stress in Females: Tend and Befriend, not Fight or Flight. *Psych Review*.
- B) Selye. (1956). *The Stress of Life*. Chapters 3, 4 and 10.

Week #5 Smoking research and accidents (Dr. Lynn Kozlowski)

- A) Peter S Blair et al., Babies sleeping with parents: case-control study of factors influencing the risk of the sudden infant death syndrome *BMJ* 1999;319:1457-1462 (4 December) <http://www.bmj.com/cgi/content/full/319/7223/1457> Plus commentary by Ed Mitchell.
- B) Kozlowski, et al., 1989. Self-selected blocking of vents on low-yield cigarettes. *Pharmacology, Biochemistry and Behavior*, 33: 815-819.
- C) Sweeney, C.T., Kozlowski, L.T., & Parsa, P. 1999. Effect of filter vent blocking on carbon monoxide exposure from selected lower tar cigarette brands. *PBB*, 63: 167-173.

Week #6 Behavioral aspects of diabetes (Dr. Jan Ulbrecht)

- A) Diabetes Prevention Program Research Group. Reduction in the incidence of Type 2 diabetes with lifestyle intervention or metformin. (2002). Journal of the American Medical Association, 346: 393-403.
- B) Handout by Dr. Ulbrecht--Case studies of self care in patients with Type 2 diabetes
- C) Assignment posted on web to be completed before class (involves selecting a paper from Diabetes Care to present in class).

Week #7 Estrogen and lipid lowering (Dr. Sheila West)

- A) Writing group from the women's health initiative. (2002). Risks and Benefits of estrogen plus progestin in healthy postmenopausal women. *JAMA*, 288: 321-333.
- B) Muldoon et al. (2000). Effects of lovastatin on cognitive function and psychological well-being. *Am. J. Medicine*, 108, 538-546.
- C) West et al (2001). Transdermal estrogen reduces vascular resistance and serum cholesterol in postmenopausal women. American Journal of Obstetrics and Gynecology, 184(5): 926-933.

Week #8 Discussion of term paper topics (Drs. Kozlowski, Petrill and West).

- A) Be prepared to discuss your idea(s) in detail. Bring abstracts from papers you propose to use. If you are trying to decide between a couple of topics, the group can help you discuss your options and select one.

TERM PAPER PROPOSAL MUST BE SUBMITTED FOR INSTRUCTOR APPROVAL BY DATE LISTED ON SCHEDULE ABOVE.

Week #9 Childhood Obesity (Dr. Lori Francis)

- A) Davison and Birch (2001). Childhood overweight: A contextual model and recommendations for future research. Obesity Reviews.
- B) Francis, Hofer and Birch (2001). Predictors of Maternal Child Feeding Style: Maternal and child characteristics. Appetite.
- C) Francis and Birch (2005). Maternal weight status modulates the effect of restriction on daughters eating and weight. International Journal of Obesity.

Week #10 Integrating Bio-psycho-social Approaches to Health and Development (Dr. Steve Petrill)

- A) Rutter, M. (2005). Environmentally Mediated Risks for Psychopathology: Research Strategies and Findings. *Journal of the American Academy of Child & Adolescent Psychiatry*, 44(1), 3-18.

- B) Moffitt, T. E. (2005). The new look of behavioral genetics in developmental psychopathology: Gene-environment interplay in antisocial behaviors. *Psychological Bulletin*, 131(4), 533-554.
- C) Slomkowski, C., Rende, R., Novak, S., Lloyd-Richardson, E., & Niaura, R. (2005). Sibling effects on smoking in adolescence: Evidence for social influence from a genetically informative design. *Addiction*, 100(4), 430-438.

Week #11 Understanding Molecular genetics (Dr. Steve Petrill)

- A) Plomin, R., Owen, M. J., & McGuffin, P. (1994). The genetics of complex human behaviors. *Science*, 264, 7133-7139.
- B) Cardon, L. R., & Bell, J. I. Association study designs for complex diseases. *Nature Reviews Genetics*, 2, 91-99.
- C) Gomes, M.V., Soares, M.R., Pasqualim-Neto, A., Marcondes, C.R., Lobo, R.B., & Ramos E.S. (2005). Association between birth weight, body mass index and IGF2/ApaI polymorphism. *Growth Horm IGF Res*, EPUB ahead of print.

Week #12 Ethnicity and Health (Dr. Steve Petrill) Read in the following order:

- A) Stevens, J. (2003). Racial Meanings and Scientific Methods: Changing Policies for NIH-Sponsored Publications Reporting Human Variation. *Journal of Health Politics, Policy and Law* 28.6 (2003) 1033-1087.
- B) Risch, N., Burchard, E., Ziv, E., & Tang, H. (2002). Categorization of humans in biomedical research: genes, race and disease. *Genome Biol*, 3(7), comment2007.1–comment 2007.12.
- C) Shields, A. E., Fortun, M., Hammonds, E. M., King P. A., Lerman, C., Rapp, R., & Sullivan, P. F. (2005). The use of race variables in genetic studies of complex traits and the goal of reducing health disparities: a transdisciplinary perspective. *Am Psychol*, 60(1), 77-103.

Week #13 THANKGIVING HOLIDAY (11/23 - 11/25)

TERM PAPER DUE: One 15-20 page, double-spaced, typed paper on a topic that must be pre-approved by the instructor; due by date and time listed on schedule above.

Week #14 Nutritional Interventions (Dr. Colin Kay)

- A) Dansinger ML, Gleason JA, Griffith JL, Selker HP, Schaefer EJ. (2005). Comparison of the Atkins, Ornish, Weight Watchers, and Zone diets for weight loss and heart disease risk reduction. *JAMA*, 293: 43-53.
- B) Parthasarathy S, Khan-Merchant N, Penumetcha M, Khan B, and Santanam N. (2001). Did the antioxidant trials fail to validate the oxidation hypothesis? *Current Atherosclerosis Reports*, 3: 392-398.
- C) Di Buono M, Hannah JS, Katzel LI, Jones PJH. (1999). Weight loss due to energy restriction suppresses cholesterol biosynthesis in overweight, mildly hypercholesterolemic men. *Journal of Nutrition*, 129: 1545-1548.

Week #15 LAST CLASS (Drs. Petrill and West).

- A) This entire session is devoted to individual, in-class presentations (allowing time for critique of your presentations and Q & A).