University of Toronto Scarborough
Department of Psychology

Current Topics in Abnormal Psychology

PsyD33
Tuesdays 5-7 PM, MW 110
Professor Konstantine Zakzanis
Office Hours: Tuesdays 4-5 & 7-8pm (or by appointment)
zakzanis@utsc.utoronto.ca

Brief Description of Current Topics in Abnormal Psychology:

In your Abnormal Psychology class you were taught that throughout history, whether a person's behavior is labeled abnormal often has depended on the cultural norms for appropriate behavior and the gender and ethnicity of the person and that current definitions of abnormality focus on the person's ability to function in daily life and his or her level of distress and grasp of reality. You were also told that many biological and psychological tests are used to assess people's functioning and well-being and that the information gathered in these tests is compared to criteria for diagnosing psychological disorders provided in guidebooks such as the DSM. You were also shown that several modern biological and psychological theories provide different ways of understanding and treating people with psychological disorders and that most disorders appear to be influenced both by biological and psychosocial factors, and some of these theories integrating these factors have proven most useful in understanding and treating abnormality, while others have failed miserably.

In short, we tried to answer the question "what is abnormality?" In others words we answered the "what" question.

What remains to be asked, however, is "how are these abnormalities established and supported in the scientific literature?" In other words, we need to answer the "how" question.

To do so, this course will provide students with a framework for critically assessing the research literature. That is, we typically accept 'scientific findings' if they have been found to equate to established statistical criterion (e.g., $p<.05$). When a research

hypothesis (e.g., frontal lobe reduction in schizophrenia) is supported with significant statistical evidence (i.e., $p<.05$), research scientists will then argue in support of their hypotheses (i.e., frontal lobe reduction causes schizophrenia).

This methodology is both faulty and illogical.

We will explore why this methodology is faulty and illogical. Students will then be shown alternative methodologies for assessing the 'significance' of a research study (i.e., effect size analyses and meta-analysis), and then asked to apply these alternative methodologies to their chosen area of interest.

Students will be expected to demonstrate the following:

1. A clear understanding of statistical significance testing and its limitations
2. Theoretical knowledge and practical application of alternative methodologies for assessed the 'significance' of a research study
3. An ability to demonstrate that he/she can critically evaluate the research literature of a chosen area of interest
4. And finally, a greater understanding of a chosen area of interest in Abnormal Psychology

Important Notes:

This course is meant to be a seminar. As such, you will find that the nature of a seminar is unlike many of the courses you have taken to date. Moreover, a seminar is much like the type of learning experience you would gain in graduate or medical school. Because of its smaller size, there is greater opportunity for independent learning under the supervision of the instructor. At the same time, students are expected to learn from each other by way of participation during presentations. Hence, you will find that your final grade is very much tied to your ability to learn independently (e.g., by gathering appropriate and plentiful readings) and to your participation in class.

*NOTE: Students with a disability/health consideration are encouraged to approach me and/or the AccessAbility Services Office @287-7560. They can also drop by the office, S302B, inside the Resource Centre. The Coordinator is available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations.

Readings:

*These are available on the course website.

Bakan, D., (1966). The test of significance in psychological research. *Psychological Bulletin*, *66*, 423-436

Rosenthal, R. (1995). Writing meta-analytic reviews. *Psychological Bulletin, 118*, 183-192.

Zakzanis, K. K. (1998). Brain is related to behavior (p < .05). *Journal of Clinical and Experimental Neuropsychology, 20*, 419-427.

Zakzanis, K. K. (1998). Quantitative evidence of neuroanatomic and neuropsychological markers in dementia of the Alzheimer's type. *Jounral of Clinical and Experimental Neuropsychology, 20*, 259-269

Zakzanis, K. K., & Heinrichs, R. W. (1999). Schizophrenia and the frontal brain: A quantitative review. *Journal of the International Neuropsychological Society, 5*, 556-566.

Zakzanis, K. K. (2001). Statistics to tell the truth, the whole truth, and nothing but the truth: Formulae, illustrative numerical examples, and heuristic interpretation of effect size analyses for neuropsychological researchers. *Archives of Clinical Neuropsychology, 16,* 653-667.

Further Required Reading:

* This text is available in the book store

Borenstein, M., Hedges, L. V., Higgins, & Rothstein, H. (2009). *Introduction to Meta-Analysis*. Wiley Publishing.

*Once you have grasped the content of these readings, you are expected to gather your related readings in keeping with your chosen area of interest.

Important Dates: 2011 Fall Session

Tuesday, August 16	Last day to pay fees.
Monday, September 5	Labour Day - University closed.
Thursday, September 8	Classes begin in F and Y courses.
Wednesday, September 14	Last day for students writing deferred examinations in December to adjust their current course load.
Wednesday, September 21	Last day to add F and Y courses.
Monday, October 10	Thanksgiving Day - University closed.
Wednesday, November 16	Last day to drop F courses without academic penalty and have them removed from the transcript.
Thursday, December 1	Last day of classes and last day for submission of term assignments in F courses. **Note: classes are held on this date only for courses that normally meet on a Monday.**
Friday, December 2 - Tuesday, December 6	Study Break.
Friday, December 2 - Tuesday, December 20	2011 Summer deferred examinations.
Tuesday, December 6	Last day to drop UTSC F courses and have them remain on the transcript with a grade of LWD indicating withdrawal without academic penalty. After this date grades are recorded on transcripts whether course work is completed or not (with a '0' assigned for incomplete work) and they are calculated into GPAs. (Note: See www.utsc.utoronto.ca/registrar for LWD dates for courses on other campuses.)
Wednesday, December 7 - Tuesday, December 20	Final examinations in F courses.
Wednesday, December 21 - Sunday, January 1	December break - University closed.
Tuesday, February 14	Last day to confirm intention to graduate at the 2012 Spring Convocation.

Grading Scheme:

(1) Proposal (10%)

On **October 18** your proposal is due. On this day, each student's proposal will be reviewed with the instructor in class to determine (1) whether you grasp the task at hand required to successfully complete the critical review paper, and (2) determine whether your area of interest is suitable for critical review.

To meet these requirements, your proposal should include a very brief outline of your critical review paper (e.g., what you will cover, what you wont). It should include evidence that you have begun an exhaustive search for research studies (e.g., outline your search methods to date, and how many studies you believe are appropriate to be included into a critical review—ie., you can calculate effect sizes from). Finally, it should include a detailed example of your ability to calculate an effect size from an actual research study, and your ability to interpret is appropriately.

(2) Presentation (20%)

Students are required to present a 30-minute review of their chosen area of study.

The presentation will be evaluated on your demonstrated knowledge of your area (e.g., a fluent understanding of the topic—hence, you do not want to stand there and read). It will also be to your benefit to use your newly acquired methodological skills to demonstrate that you have critically reviewed research studies related to a specific area of interest within your topic.

The order in which you will present will be decided on the following: The student who has the earlier date of presentation, will have first choice of topic. Note, no two students may have the same topic.

(3) Critical Review Paper (50%)

Students are required to complete a critical review paper. The review is expected to incorporate both a qualitative review of your chosen area of study and demonstration of your ability to "critically review" the research literature surrounding your area of study.

As an example outline of what is expected, the following is a review paper outline that was commonly used in previous years:

I. History of the disease (key people and early thinking)

II. Epidemiology (genetics where applicable)
III. Pathophysiology
IV. Neurobehavioral, qualitative aspects of the disorder
V. Critical review of the research literature
    A. Surveying studies; vote counts and outline conflicting findings
    B. What do these studies say on the surface according to their statistical significance?
    C. Rationale as to why these studies may be faulty
        a. Review of effect sizes and why they may be more insightful
        b. Review of meta analysis and how it can be used to review these studies more validly
    D. Presentation of Effect sizes and Meta-Analysis (use the Rosenthal Article as a guide)
    E. Your findings, interpretations and conclusions

Your review paper is due on the last day of classes (**November 29**)

(4) Participation (10%)

As noted, students are expected to learn from each other by way of attendance and participation during presentations. Hence, you will find that your final grade is very much tied to your participation in class—10% of your final grade to be exact.

(5) Surprise Exam (10%)

On November 8, you will be surprised (kind of) with an exam. The exam will ask you to compute effect sizes from two primary studies, and conduct a meta-analysis with the findings. You will be asked to present specific statistics (e.g., d, OL%, and an N-fail safe) and to detail their meaning in the context of the "review" in a few sentences. There is no make up exam if you miss it (unless you have appropriate medical documentation). PLEASE BRING YOUR CALCULATOR.

Lecture Dates:

September 13: Welcome and "Get to Know" along with Brief Course Description and Requirements; Examples of Topics to Get you Thinking About Next Week

Readings:

Borenstein Text:

Chapter 1: "How a Meta-Analysis Works"
Chapter 2: "Why Perform a Meta-Analysis"
Chapter 28 "Vote Counting- a new name for an old problem"
Chapter 39 "Overview"
Chapter 40 "When Does it Make Sense to Perform a Meta-Analysis"

September 20: Students required to select presentation dates today (this can get ugly!... please be sure to have a second and even third choice with respect to a topic) & Lecture: Critical review of traditional statistical methodologies and introduction to effect sizes and meta-analysis

Readings:

Zakzanis, K. K. (1998). Brain is related to behavior (p < .05). *Journal of Clinical and Experimental Neuropsychology, 20*, 419-427.

Borenstein Text:

Chapter 31 "Overview"
Chapter 32 "Effect Sizes Rather than p-Values"

September 27: Lecture: Critical review of traditional statistical methodologies and introduction to effect sizes and meta-analysis

Readings:

Zakzanis, K. K. (2001). Statistics to tell the truth, the whole truth, and nothing but the truth: Formulae, illustrative numerical examples, and heuristic

interpretation of effect size analyses for neuropsychological researchers. *Archives of Clinical Neuropsychology, 16,* 653-667.

Borenstin Text:

Chapter 30 "Publication Bias"

October 4: Lecture: Instructor's example presentation on "Searching the Brain for Schizophrenia" & illustrative examples and calculations. Bring your calculators to class!

Readings:

Zakzanis, K. K., & Heinrichs, R. W. (1999). Schizophrenia and the frontal brain: A quantitative review. *Journal of the International Neuropsychological Society, 5,* 556-566.

Zakzanis, K. K. (1998). Quantitative evidence of neuroanatomic and neuropsychological markers in dementia of the Alzheimer's type. *Jounral of Clinical and Experimental Neuropsychology, 20,* 259-269

Borenstein Text:

Chapter 41 "Reporting the Results of a Meta-Analysis"
Chapter 43 "Criticisms of Meta-Analysis"

October 11: Research day. There is no class scheduled for today. You should use this time wisely so to ensure your proposal meets the requirements for quantitative review.

Readings:

Rosenthal, R. (1995). Writing meta-analytic reviews. *Psychological Bulletin, 118,* 183-192.

Borenstein Text:

Chapter 3 "Overview"
Chapter 4 "Effect Sizes based on Means"

October 18: YOUR PROPOSAL IS DUE TODAY. Each student's proposal will be reviewed with the instructor in class to determine (1) whether you grasp the task at hand required to successfully complete the critical review paper, and (2) determine whether your area of interest is suitable for critical review.

*Please come to class according to surname order so that you don't waist time waiting around. For example, if your last name begins with the letter 'A,' come to class at 5-pm. If it starts at the letter "M," come to class at 6:00pm, and so on…

*Student presentations begin… …All students are required to e-mail me their presentation the day of. Also, please ensure to BRING your presentation to class on a USB key (don't trust that you will be able to access it on-line).

October 25: Student Presentations

    1.
    2.
    3.
    4.

November 1: Student Presentations

    1.
    2.
    3.
    4.

November 8:

 "Surprise Exam"

November 15: Student Presentations

     1.
     2.
     3.
     4.

November 22: Student Presentations

     1.
     2.
     3.
     4.

November 29: Student Presentations

     1.
     2.
     3.
     4.

NOTE: YOUR PAPER IS ALSO DUE TODAY…