PSYC 4462 (and 4999) Research Experience in Clinical Psychology
2023-2024
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(she, her, hers)

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Course Overview:

       This year-long course is intended to give undergraduate psychology majors an **intensive** experience in helping design, carry out, analyze, write up and present a serious research project in the general area of clinical psychology. The vast majority of class time will be spent as small group, research "lab meetings" in which all students in a group are expected to participate actively in discussion. Outside of class meetings, each student will be expected to conduct independent reading in professional journals relevant to their topic of study and to participate in design and data collection (recruiting and running subjects, managing raw data, data cleaning) and data analysis (using statistical software). If we're lucky, one or two of these projects may actually yield results interesting enough to try for publication.

Course Requirements:

1. **ACTIVE CLASS PARTICIPATION.** Please do not expect to earn an A or A- in this course if you are not prepared to participate actively and frequently in class/lab meeting discussions. While it is quite possible that **you** will learn a good deal simply sitting quietly and absorbing the material, I require that each student actively **contribute** to the intellectual debate, not simply profit by it. You can be quiet and still be a good student. You **cannot** be quiet and be a good scientist. The very nature of the scientific endeavor requires active, skeptical voices to be raised in constant questions and critiques. The purpose of this course is to help you begin the shift in identity from **consumer** of other people's scientific efforts to **producer** of good science. This is a fundamentally different role from that of student, although being a good student obviously helps.

2. Completion of IRB (Institutional Review Board) Social/Behavioral Research Course. In the first week of class, you must complete the University's on-line course, including all exams, which will certify you to be involved in research involving human subjects. You can find the entry portal at:

    www.citiprogram.org

    You should register for Group 2, Social/Behavioral Research Course. The course takes about 4 hours to complete. It's easiest to just print the materials first, refer to them during the video presentations and use them to take the test. I will need a

pdf of your completion certificate to attach to your group's IRB proposal (see #3 below.)

3. With your team, write an Institutional Review Board proposal (either a new one or an amendment to an existing protocol) complete with lit review, methodology, consent forms and all questionnaires. This is the **design** phase of your study in which you will decide exactly what question(s) you want your research to answer, and how exactly you will go about asking the question(s). We should aim to have all the IRB proposals and/or updates submitted to the IRB by the middle of October at *the latest.*

4. Collection of data throughout the mid-fall to early spring. You and your team will be responsible for "running" all the subjects (e.g. collecting data online through Qualtrics, coding therapy transcripts, etc.) from October to mid-March.

5. Data entry and management. You and your team will be responsible for managing all data collection, keeping track of consent and (possibly) contact information for all subjects.

6. Data analysis. By the end of the year, you will all be familiar with SPSS (statistical software package actually used by real scientists) and how to run a number of statistical tests, including correlations, t-tests, multiple regressions and ANOVAs. You will know how to check for between group differences, main effects, interactions, moderation and mediation. You may also use factor analysis and reliability analysis, depending on your design and the nature of your project.

    Required Reading: Amrhein, Geenland, McShane et al. (2019). Scientists rise up against statistical significance. *Nature, 567,* 305-307.

7. **Paper**: Completion of a written manuscript, in standard APA style, based on your research project. Please note, consistent with new departmental policy, every student must write their *own version* of the paper at the end of the year. You may write the "Methods" section collaboratively, and every paper on a project may use that. But the Introduction (literature review, laying out the problem and the project), the Results (statistical findings) and the Discussion (summary, conclusions and future directions) must be written independently. While this never happens in the "real world" of collaborative research, this is a class, and each of you is expected to practice each one of these skills, not just the part you feel most comfortable with. If the project might be publishable, I will then require you to *combine* your individual papers into a single draft that I will work with to get it ready to submit for publication. Yes, this is extra effort. But if you get a publication out of it, it's well worth it.

8. **Poster and Talk:** Final presentation of the group's research to members of the psychology department during the poster fair and honors talks at the end of the semester. This is a departmental requirement for all honors students. I require it

of *every* student in my class as well, whether or not you are in the honors seminar. Part of being a scientist means being able to communicate your findings effectively both in writing and to a live audience. There's no point in doing the work unless you tell people about it.

Deadlines:

9/07 Complete IRB human subjects training and submit certificate of completion.

10/12 If necessary (a new project) submission of full protocol to IRB.

12/15 Each student turns in a draft of Introduction and Methods sections of their papers.

4/11 Completion of data collection for end of year thesis and presentations. (Some groups may well continue collecting data into the late spring/summer to complete the actual project.)

4/18 All data in hand fully cleaned and ready to analyze.

4/25 Posters and talks drafted.

5/02 Final papers due.

Note: 4997 students who are also taking the honors seminar may have additional deadlines for presentations, drafts, creating figures, etc. that will be specified by the teacher of that seminar. Please turn in drafts of all such work to me for review ***prior*** to presenting or turning them in to the honors seminar.

Grades:
While the vast majority of students in my class earn solid "A"s, not every student does. Moreover, not every student in a group will necessarily receive the same grade. Your class participation, your contribution to the design, your ability to be a proactive and creative problem solver and your willingness to devote VAST amounts of time to this course all make a difference, and are all noticed by me. In addition, each of you will be graded on your final paper. I will assess your understanding of the prior literature and how your project is positioned to answer a novel question, your mastery of statistics, and your interpretation of your findings. You will receive separate grades for the fall and the spring, and I will include constructive feedback in the fall if I believe that there are things you could do to improve your performance.

Publication Credit:
If any of these projects actually result in a published paper, I will certainly consider offering joint authorship. Over the past 24 years, 79 of my students have co-authored papers with me in professional journals, and numerous others have had conference posters accepted at major professional meetings. Co-authorship is not guaranteed, however. It depends on your initiative, drive, and contribution to the project.

In almost all cases, I will have first authorship. In an extraordinary case, a student might be listed as first author, but they would have to propose and substantially design the project themselves.

Are you scared yet?

In case you haven't noticed, I set the bar VERY high in this course. Please DO NOT take this course if you are not willing to make it your top academic priority. You will be devoting a MINIMUM of 10 hours per week to this, and significantly more during "crunch times." I've worked at 11 pm running stats with students. Students have come to my home on weekends (pre-COVID!) to revise papers. Hard work pays off. Students from my lab routinely win various undergraduate research awards, including the Psychology Department's Vittelles Award for Distinguished Research by an Undergraduate, the Sabini Award for research in social psychology, the Abela Award for research in positive psychology and even the prestigious University-wide Rose Award for Undergraduate Research. Approximately 50% of my former students have gone on to graduate work in clinical psychology (or a closely related field such as medicine, epidemiology, social work or developmental psychology) at prestigious and competitive graduate programs. I have little time or patience for students who are not interested in investing themselves in the work. So think twice.

But if it's right for you, fasten your seat belt, and welcome aboard!

Potential Projects for 2023-2024

One of my primary areas of expertise is in the domain of integrative behavioral health and developing and testing novel treatments for people with complex GI disorders like IBS and inflammatory bowel diseases such as Crohn's and Colitis. There are a number of projects in this domain this year that need teams of really good people to work on them. Because there are so many potential projects and the requirements of some of them are unclear, it may be that people will cycle on and off several projects in this domain according to need and interest.

1. Teletherapy for Patients with Inflammatory Bowel Disease (the ADEPT study).

Together with a fabulous young gastroenterologist over at HUP (Dr. CS Tse) I have a grant to implement CBT teletherapy for individuals with inflammatory bowel diseases (IBDs). A total of 30 patients with IBD are being randomized to 8 sessions of teletherapy. The therapy is being delivered by licensed clinicians at the Center for the Treatment and Study of Anxiety, all of whom I trained. All the sessions are being recorded. We will soon have a total of 240 hours of therapy sessions to watch and code for a number of psychotherapy process components, including treatment fidelity, therapeutic alliance, and patient themes, among others. We will be looking for moderators and mediators of therapy efficacy. This is a fascinating, but time-consuming process that needs sophisticated raters who understand the disorder(s) and the treatment. This is a classic psychotherapy process and outcome study in clinical psychology and whoever works on it will have the opportunity to watch actual therapy sessions, and will be very well equipped to step right into a full-time research coordinator job after college. Two honors students (Lily Suh and Ella Yang) and will be taking the lead on this project, but I will need a team of at least 4 extra serious and committed raters to help develop the coding system and apply it to the therapy tapes.

2. IBD QORUS and the CORE Study

Another aspect of my work with Dr. Tse is the CORE Study which is examining the acceptability of a number of low intensity, educational, self-help or peer to peer counseling platforms to address the psychosocial needs of IBD patients. One of the treatment arms is my self-help book for IBD patients (*Coping with Crohn's and Colitis*). We have two transcripts from patient focus groups that need to be coded for thematic content. Dr. Tse and I are also applying for another grant that will test the actual efficacy of these self-help modalities in a true RCT. We are also in negotiations with a large pharmaceutical company to have them fund a study of combining psychosocial self-help with medication to see if it can improve efficacy and reduce disability and medical utilization. Both of these efforts are still uncertain, but if we get the funding, I will definitely need a team to work on both these projects! And the transcripts need to be coded now.

3. What do Gastroenterologists Know about Psychopathology and IBS?

There is significant co-morbidity between irritable bowel syndrome (IBS) and various psychiatric disorders and emotional distress. In addition, IBS responds best to integrated care with a significant behavioral health or mind/body component. Unfortunately, we suspect that

most GI docs are poorly prepared to recognize or diagnose psychiatric co-morbidity, and may be unaware of the existence of self-help resources and integrative care platforms that can benefit their IBS patients. Under the leadership of Riley Mack and Clara Williams, this group will conduct a multi-modal study of what GI docs do (and don't!) know about behavioral health interventions for IBS patients. The goal is both exploratory and educational.

4. The Efficacy of a new Integrated Behavioral Health Platform

This year, Bold Health also launched a new integrative behavioral health platform to provide a range of services, including CBT via telehealth, to GI patients in a business to business model through a large company's EAP. While it is not possible to conduct a full randomized clinical trial, I am eager to start building in Quality Improvement data gathering which will speak to the acceptability and (to some extent) the efficacy of the service. We may also try to conduct focus groups with the providers (health coaches and therapists) to glean what information we can from them about what is working and what isn't. Megha Neelapu will be taking the lead on this project for her honor's project, but will need a team of people to work with her.

5. PredictView Validity and Acceptability

PredictView, an AI enabled company that is interested in mental health and social media, reached out to me to partner with them. I have agreed to conduct an acceptability/feasibility study of their platform. They have an AI machine learning algorithm that can monitor social media feeds for signals suggesting depression and anxiety. Their business model is still evolving, but ultimately they hope to use the system to red flag folks who need intervention and get them connected to care. I have had several long meetings with them, and have hashed out a basic initial study. We can do it here at Penn with undergrad participants. I will need a team of at least 4 people to run this. We will be getting the data that PredictView generates, but we will *also* need to use validated self-report measures and *structured clinical interviews* to determine the sensitivity and specificity of their data. That means I will train you and supervise you in doing a standard structured clinical interview, and you will conduct those interviews with participants. We want to get about 150-200 participants, so that means each person on the team will need to conduct a *lot* of interviews! If this collaboration is fruitful, it might lead to treatment development and intervention trials, which would be really cool.

6. Black Students and Embodied Grief

Deborah Olatunji will be doing her honors thesis with me on this topic. She is looking for one other student to work with her. What follows is her description of her project. Black Americans face higher risks for loss, trauma, and disenfranchised grief. In a study done to comprehend the holistic grief effects of bereaved Black female college students by Dr. Mary Alice Varga, she notes that "students in their first semester of college with depressive symptoms are more likely to drop out of college by the end of their second year (Boyraz et al., 2016). Furthermore, African Americans are statistically significantly more at risk for prolonged grief symptoms (Bantjes et al., 2019; Goldsmith et al. 2008) and non-fatal suicidal behaviors (Supple et al., 2013) which could disrupt college progression as well." This highlights the urgency of studying Black grief,

especially in a world post-COVID 19 where disparities for the Black community were higher than any other racial group. Even though this is the case, the majority of the student on bereavement in American universities center white students and their grief experiences (Glickman 2021). For my honors thesis, I intend to research this question: how do Black undergraduate students cope with grief? This study will draw from the Holistic Impact of Bereavement that suggests college students are affected by grief, or experience grief effects, in six dimensions — physical, cognitive, behavioral, interpersonal, emotional, and spiritual or world assumptions (Balk, 2011). Students may experience grief affects in any of all of the six dimensions. My hypothesis is that Black students with a variety of grief experiences are less likely to have received the support that they need; the main goal is to create a needs assessment for grief support based on the surveys from participants. The additional aim is to include a humanities/artistic component that displays the findings to community members through an interactive gallery.