

Researching Population Health

21:920:372

21:070:372

Summer 2024

Professor: Jesse Liss, PhD

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Virtual office hours:

Mondays at 12 – 1 PM

(See Canvas for Zoom link & schedule)



Course Description

This course is intended to provide undergraduates with a comprehensive introduction to the field of population health research. The purpose is to equip students with the knowledge and skills necessary to understand and engage in meaningful population health research, as well as evaluate published research. Population health research is an interdisciplinary field that examines the health outcomes of groups of individuals, including the distribution of such outcomes within the group, the determinants of health outcomes, and interventions and policies that effect health outcomes. Concepts are illustrated using the [Adolescent Brain Cognitive Development \(ABCD\) Study](#), which is also the basis for coursework. Coursework consists of five assignments that sum to a real [study preregistration](#), including: (1) research question and hypothesis, (2) literature review, (3) instrumentation and measurement; (4) data collection and sample; (5) data ethics and data analysis plan.

Readings:

No book purchases required.

“This course has received an 'Open and Affordable Textbooks Program award from the Rutgers University Libraries. The OAT Program supports textbook affordability at Rutgers by encouraging courses to adopt educational materials that are freely available, available at a low cost (compared to similar courses), or part of the Rutgers University Libraries' electronic collections, and thereby free of charge to Rutgers University students. As a student in this course, you will be asked to provide feedback on this initiative at the end of the semester.”

Course Learning Outcomes:

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

1. Identify and differentiate variables, craft a confirmatory research question, recognize and control confounding variables, generate a testable hypothesis, and ensure alignment with the Adolescent Brain Cognitive Development Study (ABCD) study design.
2. Develop a thematic literature review that supports the chosen variables, systematically explores relevant literature, and concludes by justifying your own research question.
3. Distinguish between simple and complex variables, outline their operational definitions, and explore the reliability and validity of the measures.
4. Understanding of the data collection methods used in the ABCD study to ensure accurate application, aligning a research sample with ABCD demographic and clinical characteristics, and accurately estimate sample sizes using existing literature.
5. Understand and apply the ethical standards outlined in the ABCD Data Use Certificate and plan to analyze the collected data using appropriate statistical tests while considering potential biases and limitations.
6. Develop a comprehensive study preregistration with the ABCD Study while preparing for reproducible research execution.

Student Evaluation and Grade Policy:

There are five assignments in the course. Final grades are an average of four out of the five assignments. This means that you can skip one assignment (not complete the assignment), or if you complete all five assignments then your lowest grade will be dropped.

The average is converted to a letter grade as follows:

A (90% or above), B+ (85-89), B (80-84), C + (79-75), C (70-74), D (65-69), F (64 and below)

Assignments

- You can find directions and grade rubrics for each assignment within each module.
- You may optionally work with one partner, but you must each individually upload your work and put both names on the TOP of the assignment submission.
 - There is a discussion board on canvas beneath the syllabus where you can find a partner
- There are soft due dates listed below, these are target due dates
 - There is no grade point penalty for missing the soft due dates.
 - However, if you miss the soft due date, then do not expect a quick turnaround on the grading of your submitted assignment. That is, if you miss the soft date, then I will grade your assignment on my schedule.
- **The hard deadline for all assignments is July 3 at 11:59 PM.**
 - *Late assignments are unacceptable.* The reason for this is that the due date is already pushed back as far as possible to provide extra flexibility. My own grades are due to the university shortly after this due date. For this reason, I will not accept late work.
 - Extensions are only possible *with disability, and/or prior approval, and/or documented medical or health excuse.*
- **You may revise and resubmit each assignment as many times as you wish up until July 3 at 11:59 PM**
 - As you submit work throughout the semester, I aim to grade your assignment submissions within one week of your submission.

Assignment	Soft Due Date
1) Research Question & Hypothesis	June 3
2) Literature Review	June 10
3) Instrumentation & Measurement	June 17
4) Data Collection & Sample	June 24
5) Data Ethics & Data Analysis	July 1

In-Person Course Structure

- ~~Attendance: As per university policy, “Students are expected to be in attendance at all regularly scheduled course meetings.”~~
- ~~Course schedule: The course schedule and learning module schedule are in the syllabus (this document), towards the end.~~
- ~~Class schedule: The class meeting schedule follows the university class schedule and is detailed under Announcements on Canvas. For any unexpected changes, I will email and edit the class schedule announcement on Canvas.~~ Accommodation and Support Statement

Rutgers University-Newark (RU-N) is committed to the creation of an inclusive and safe learning environment for all students and the University as a whole. RU-N has identified the following resources to further its mission of access and support:

For Individuals Experiencing Disability: The Office of Disability Services (ODS) works with students with medical, physical, and/or mental conditions who encounter disabling barriers to determine reasonable and appropriate accommodations for access. Students who have completed the process with ODS and have approved accommodations are provided a Letter of Accommodation (LOA) specific to each course. To initiate accommodations for their course students must both provide the LOA and have a conversation with the course instructor about the accommodations. This should occur as early in the semester as possible. More information can be found at the [RU-N ODS website \(ods.newark.rutgers.edu\)](https://ods.newark.rutgers.edu). Contact ODS at (973) 353-5375 or via email at ods@newark.rutgers.edu.

For Individuals who are Pregnant: The Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy. Students may contact the Office of Title IX and ADA Compliance at (973) 353-5063 or via email at TitleIX@newark.rutgers.edu.

For Short-term Absence Verification: The Office of the Dean of Students can help with absences related to religious observance, emergency or unavoidable conflict (illness, personal or family emergency, etc.). Students should refer to [University Policy 10.2.7](#) for information about expectations and responsibilities. The Office of the Dean of Students can be contacted by calling (973) 353-5063 or emailing deanofstudents@newark.rutgers.edu.

For Individuals with temporary conditions/injuries: The Office of the Dean of Students can assist students who are experiencing a temporary condition or injury (broken or sprained limbs, concussions, recovery from surgery, etc.). Students experiencing a temporary condition or injury should submit a request using the following link: <https://temporaryconditions.rutgers.edu>.

For Gender or Sex-Based Discrimination or Harassment: The Office of Title IX and ADA Compliance can assist students who are experiencing any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking. Students can report an incident to the Office of Title IX and ADA Compliance by calling (973) 353-1906 or emailing TitleIX@newark.rutgers.edu. Incidents may also be reported by using the following link: tinyurl.com/RUNReportingForm. For more information, students should refer to the University’s Title IX Policy and Grievance Procedures located at <https://uec.rutgers.edu/wp-content/uploads/60-1-33-current-1.pdf>

For support related to Interpersonal Violence: The Office for Violence Prevention and Victim Assistance (VPVA) can provide any student with confidential support. VPVA is a confidential resource and does **not** have a reporting obligation to Title IX. Students can contact the office by calling (973) 353-1918 or emailing run.vpva@rutgers.edu. VPVA also maintains a confidential text-based helpline available to students; students can text (973) 339-0734 for support. Students do not need to be a victim/survivor of violence to receive assistance; any student can receive services, information, and support.

For Crisis and Concerns: The Campus Awareness Response and Education (CARE) Team works with students in crisis to develop a plan of support plan and address personal situations that might impact their academic performance. Connect with the CARE Team by using the following link: tinyurl.com/RUNCARE or emailing careteam@rutgers.edu.

For Psychological Support (Stress, Mood, Family Issues, Substance Use concerns and other personal challenges): The Rutgers University-Newark Counseling Center provides individual therapy and support groups for students dealing with psychological issues. To schedule an appointment, email counseling@newark.rutgers.edu or call (973) 353-5805.

Additional support is available to any RU-N student through Uwill services:

- Umatch: Teletherapy with flexible scheduling, starting with a free account.
- Uhelp: Crisis support at 833-646-1526 (available 24/7/365).
- Urise: Wellness-based video collection with a free account.

Access Uwill@RUN at <https://my.rutgers.edu> using your netid. Services are confidential and free.

For emergencies, call 911 or Rutgers University Police Department at (973) 353-5111.