

Course Title: Evaluation and Research Designs for Public Health Interventions

Course Number: HBSP 0703

Course Prerequisite: Successful completion of a graduate level statistics course

Course Location: SPH, 683 Hoes Lane West, Room 2A

Course Date & Time: Wednesdays 3:00pm - 5:00pm

Course Instructor: Patrick R. Clifford, Ph.D.

Professor
Social and Behavioral Health Sciences
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Office Hours: Wednesdays 5:00pm – 6:00pm and by appointment

Course Website: canvas.rutgers.edu

Required Course Text: Sidani, S. Health Intervention Research: Research Design and Methods. Sage Publications, Los Angeles, CA. (2015).

Additional/Supplemental Readings/Resources:

Selected Journal Articles

American Psychological Association, Publication Manual of the American Psychological Association (Seventh Edition). American Psychological Association: Washington, D.C. (2020).

Babbie, Earl R. The Practice of Social Research (15th Edition). Wadsworth Publishing Co., Cengage Learning: Belmont, CA. (2021).

Cook, Thomas D. and Campbell, Donald T. Quasi-Experimentation: Design & Analysis Issues for Field Settings. Houghton Mifflin Company: Boston, MA. (1979).

Gitlin, Laura N. and Czaja, Sara J. Behavioral Interventions Research: Designing, Evaluating, and Implementing. Springer Publication Company: New York, NY (2016).

Keppel, G. and Wickens, T.D. Design and Analysis: A Researcher's Handbook (Fourth Edition). Pearson: London, United Kingdom (2004).

Melnyk, Mazurek Bernadette and Morrison-Beedy, Dianne (Editors) Intervention Research: Designing, Conducting, Analyzing, and Funding. Springer Publishing Company: New York, NY (2012).

Shadish, William R., Cook, Thomas D., and Campbell, Donald T. Experimental and Quasi-Experimental Designs for Generalized Causal Inference (Second Edition). Wadsworth Publishing, Cengage Learning: Belmont, CA (1994).

Course Description: This course provides students with the necessary knowledge (e.g., terminology, concepts, and procedures) for understanding and conducting behavioral health intervention research. The research designs and procedures as well as the data analytic techniques presented as part of this course are commonly used in the social and behavioral sciences as well as other fields of inquiry. An in-depth understanding of the material presented in this course is requisite for both accurately interpreting the abundance of behavioral health literature and engaging in the conduct of behavioral health intervention research. Class discussions and the development and oral presentation of a pragmatic/feasible behavioral health intervention research protocol will be the major vehicles for achieving these objectives. A working knowledge of the material presented in this course is essential for designing and implementing rigorous behavioral health intervention evaluation and research as well as for effective communication of research procedures, findings, and conclusions.

Selected Concentration Competencies Addressed: The competencies addressed in this course for the MPH, PhD, and DrPH degrees in the *Social and Behavioral Health Sciences* concentration include:

- 1) utilizing health behavior theories and models for understanding health behavior (MPH);
- 2) design evaluation/research protocols for assessing intervention effectiveness (MPH);
- 3) understand public health research as it relates to behavioral science research (MPH);
- 4) critical analysis of the scientific literature (PhD);
- 5) understanding the integration of research design, methods, and data analyses (PhD);
- 6) conceptualization of research questions and related hypotheses (PhD);
- 7) critically analyze the scientific literature (DrPH);
- 8) design research investigations related to behavioral health programs (DrPH); and
- 9) demonstrate proficiency in program evaluation and related data analyses (DrPH).

Please visit the Concentration webpages on the School of Public Health's website at sph.rutgers.edu for additional competencies addressed by this course for other degrees and concentrations.

Course Objectives: By the completion of this course, students will be able to:

- A) integrate theory, research hypotheses, interventions, measurement tools, and analyses;
- B) understand the relationship between experimental designs and causal inference;
- C) interpret findings from the behavioral health intervention literature; and
- D) formalize research questions and hypotheses specific to behavioral health interventions.

Concentration Competencies, Course Objectives, Lesson Topic, and Assessment Integration.

Competency	Course Objective	Topic	Assessment
2, 6, 8	A, C, D	Program Evaluation v. Outcomes Research	Protocol Presentations, Critiques, & Discussion
2, 6	A, B, C, D	Research Ethics: Human Subjects, IRB	Class Discussion
1, 2, 4, 5, 7	A, B	Linking Theory... Measures & Analyses	Protocol Presentations, Critiques, & Discussion
1, 2, 4, 5, 6, 7	C, D	Conceptualization and Measurement	Protocol Presentations, Critiques, & Discussion
1, 2, 5, 9	A, D	Measurement Tool Selection	Protocol Presentations, Critiques, & Discussion
3, 5	C, D	Participant Recruitment, Selection and Retention	Protocol Presentations, Critiques, & Discussion
2, 3, 5, 8, 9	B, C	Evaluation Research Designs	Protocol Presentations, Critiques, & Discussion
2, 3, 5, 8, 9	B, C	Experimental Design and Analysis	Protocol Presentations, Critiques, & Discussion
2, 5, 8, 9	B, C	Specifying Sources of Variability & the F-Ratio	Protocol Presentations, Critiques, & Discussion
1, 2, 3, 4, 5, 6, 7, 8, 9	A, B, C, D	Evaluation/Research Protocol Development	Protocol Presentations Critiques/Feedback
1, 2, 3, 4, 5, 6, 7, 8, 9	A, B, C, D	Evaluation/Research Protocol Critiques	Protocol Critique Feedback

Course Requirements and Grading:

Course Requirements:

- 1) Class Participation – Students are expected to complete assigned readings prior to class and contribute to informed discussions of course topics during class.
- 2) Attendance at two or more research seminars such as the SPH 21st Century Seminars, (highly recommended) and doctoral dissertation defenses, which are offered throughout the semester and announced via email and flyers posted in the SPH.
- 3) Ethics - Online IRB Human Subjects Research Training Certificate (Due the day that the research ethics session is scheduled. Although this assignment is required, it is not graded).

URL: <http://rbhs.rutgers.edu/hsweb/education>

Read page and follow instructions at the bottom of the page (obtain certificate of completion with score: keep original and submit a copy to the course instructor).

- 4) Research Project: Identify a contemporary public health concern and conduct a thorough search of the recent literature (i.e., past five-to-ten years) to identify a health intervention need or gap in the literature. Based on the literature review, propose an intervention or identify a health policy aimed at improving the health concern of interest (e.g., reducing risk behavior

prevalence, behavior change program, access to healthcare) and develop the associated evaluation/research protocol. The protocol should include a brief background and significance section that provides a justification/rationale for the intervention/health policy, a graphic model reflecting the project's theoretical reasoning/framework, a brief description of the relevant intervention(s), specification of the research/evaluation design, study hypotheses, relevant data collection instruments and variable identification and operationalization (e.g., independent, dependent, moderator, mediator, and covariate variables), and data analysis plan. It is recommended that the research background and significance section should be presented in outline form and limited to two-three slides. The research question of interest, related hypotheses, and the relevant variables should be typed, double-spaced, on a single slide with additional lines (i.e., spaces) separating the research question, hypotheses, and the variables of interest. The theoretical model should be typed on a single slide with all component parts clearly labeled. The research/evaluation design should be typed on a single slide and clearly labeled. Similarly, variable operationalization and the data analysis plan should each be typed on a single slide. The evaluation/research protocol will be presented orally to the class using PowerPoint and be approximately 25-30 minutes in duration. Copies of the presentation should be emailed to the instructor and all students one week prior to the scheduled presentation date.

- 5) Critiques of Fellow Student Research Projects (2): Critiques should include a summary of the research project, strengths and weaknesses/limitations, and realistic recommendations addressing project limitations. The critique presentations are due the same day that the research project being critiqued is presented. Two critiques will be presented orally to the class using PowerPoint and be approximately 8-10 minutes in duration. Although only two critique presentations are required, it is fully expected that students will review all fellow student projects and contribute to in-class discussions.

Grading:

Class Participation - 10%

Research Critique I - 15%

Research Critique II - 15%

Research Project - 60%

SPH Grading Scale:

94 - 100	A
90 - < 94	A-
87 - < 90	B+
84 - < 87	B
80 - < 84	B-
77 - < 80	C+
70 - < 77	C
< 70	F

Course Schedule:

Class Date	Topic
9/7	Introduction
9/14	Program Evaluation vs. Intervention Outcomes Research Program Justification: Background, Significance, and Rationale
9/21	Research Ethics: Human Subjects and the IRB
9/28	Linking Theory, Hypotheses, Intervention, Measures and Analyses
10/5	Variable Conceptualization and Measurement Measurement Reliability and Validity
10/12	Measurement Tool Selection: Assessing Eligibility, and Process and Outcomes in Behavioral Health Interventions
10/19	Review of Draft Presentation Materials
10/26	Evaluation Research Designs
11/2	Participant Recruitment, Selection, and Retention
11/9	Experimental Design and Analysis
11/16	Specifying Sources of Variability (Part I) Variance Estimates and the F Ratio
11/23	Thanksgiving Holiday – No Class
11/30	Specifying Sources of Variability (Part II) Variance Estimates and the F Ratio
12/7	Student Presentations
12/14	Student Presentations
12/21	Course Wrap-up and Student Evaluations

Reading Assignments: In addition to the textbook chapter readings listed below, students should review course materials prior to class so that they can participate in class discussions. Relevant PowerPoint presentations and journal articles will be made available to students at least one week prior to the scheduled class meeting.

<u>Class Date</u>	<u>Readings</u>
9/14	pp. 1-12 (Chap. 1)
9/21	pp. 14-34 (Chap. 2)
9/28	pp. 35-51 (Chap. 3)
10/5	pp. 54-64 (Chap. 4)
10/12	pp. 66-80 (Chap. 5)
10/19	pp. 81-100 (Chap. 6)
10/26	pp. 101-119 (Chap. 8 and 9)
11/2	pp. 120-134 (Chap. 7)
11/9	pp. 136-153 (Chap. 10)
11/16	pp. 154-171 (Chap. 11)
11/30	pp. 172-196 (Chap. 12)

Online 30 Project Assignments:

Attendance at two or more research seminars such as the SPH 21st Century Seminars and doctoral dissertation defenses

Institutional review board (IRB) human subjects training

Review and critique of the scientific literature relevant to the development of a health behavior intervention evaluation/research protocol

Development of a health behavior intervention evaluation/research protocol PowerPoint Presentation

Critique of fellow student health behavior intervention evaluation/research protocols to include two PowerPoint presentations

Learning Management System: Canvas will be used extensively throughout the semester for course syllabus, assignments, announcements, communication and/or other course-related activities. It is the student's responsibility to familiarize themselves with Canvas and check it regularly. If you have difficulties accessing Canvas, please inform the instructor and Canvas Support (help@canvas.rutgers.edu). Canvas is accessible at canvas.rutgers.edu.

School of Public Health Honor Code: The School of Public Health Honor Code is found in the School Catalog (sph.rutgers.edu/academics/catalog.html). Each student bears a fundamental responsibility for

maintaining academic integrity and intellectual honesty in his or her graduate work. For example, all students are expected to observe the generally accepted principles of scholarly work, to submit their own rather than another's work, to refrain from falsifying data, and to refrain from receiving and/or giving aid on examinations or other assigned work requiring independent effort. In submitting written material, the writer takes full responsibility for the work as a whole and implies that, except as properly noted by use of quotation marks, footnotes, etc., both the ideas and the works used are his or her own. In addition to maintaining personal academic integrity, each student is expected to contribute to the academic integrity of the School community by not facilitating inappropriate use of her/his own work by others and by reporting acts of academic dishonesty by others to an appropriate school authority. It should be clearly understood that plagiarism, cheating, or other forms of academic dishonesty will not be tolerated and can lead to sanctions up to and including separation from the Rutgers School of Public Health.

Students with Disabilities: Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student must apply for Services by first completing a Registration Form with the Rutgers Office of Disability Services (ODS) at ods.rutgers.edu. The student will also be required to participate in an ODS intake interview and provide documentation. If reasonable accommodations are granted, ODS will provide you with a Letter of Accommodations which should be shared with your instructors as early in your courses as possible.

Commitment to Safe Learning Environment: The Rutgers School of Public Health is committed to helping create a safe learning environment for all students and for the School as a whole. Free expression in an academic community is essential to the mission of providing the highest caliber of education possible. The School encourages civil discourse, reasoned thought, sustained discussion, and constructive engagement. Provocative ideas respectfully presented are an expected result. An enlightened academic community, however, connects freedom with responsibility. The School encourages all students to disclose any situations where you may feel unsafe, discriminated against, or harassed. Harassment or discrimination of any kind will be not tolerated and violations may lead to disciplinary actions.

Student Well-Being: The School of Public Health recognizes that students may experience stressors or challenges that can impact both their academic experience and their personal well-being. If the source of your stressors or challenges is academic, students are encouraged to discuss these challenges and circumstances with their instructor, if they feel they may need additional support or temporary accommodations at the beginning or during this course. The course instructor may consider making reasonable temporary adjustments depending on the student's situation. For personal concerns or if additional support is needed, students may reach out to the [Office of Student Affairs](#) or any of the appropriate referral resources listed on the [SPH Student Connect](#) Canvas page.

Reporting Discrimination or Harassment: If you experience any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking, know that help and support are available. You may report such incidents to the [RBHS Title IX Office](#) or to the School of Public Health's [Office of Student Affairs](#). Rutgers University has staff members trained to support survivors in navigating campus life, accessing health and counseling services, providing academic and housing accommodations, and more. If you experience any other form of discrimination or harassment, including racial, ethnic, religious, political, or academic, please report any such incidents to the School's [Office of Student Affairs](#). The School strongly encourages all students to report any incidents of discrimination or harassment to the School. Please be aware that all Rutgers employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers as listed in Appendix A to [Policy 10.3.12](#)) are required to report information about such discrimination and harassment to the School and potentially the University. For example, if you tell a faculty or staff member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty or staff member must share that information with the [RBHS Title IX Coordinator](#). If you wish to speak to a confidential employee who does not have this reporting responsibility, you can find a list of resources in Appendix A to University [Policy 10.3.12](#). For more

information about your options at Rutgers, please visit [Rutgers Violence Prevention and Victim Assistance](#).

Overview of School Policies: Academic and non-academic policies and procedures, such as Auditing a Course, Retaking Courses, Grade Grievance and others that cover registration, courses and grading, academic standing and progress, student rights and responsibilities, graduation and more may be found under [Policies](#) on the School of Public Health website. Below are select specific policies; however, students are responsible for keeping informed about academic and non-academic policies and procedures beyond those noted on this syllabus.

Graduate Student Computer Policy: Students are required to possess a personal laptop, no older than approximately two years, that must meet minimum requirements which may be found online at: sph.rutgers.edu/student-life/computer-support.html

Policy Concerning Use of Recording Devices and Other Electronic Communications Systems: When personally owned communication/recording devices are used by students to record lectures and/or classroom lessons, such use must be authorized by the faculty member or instructor who must give either oral or written permission prior to the start of the semester and identify restrictions, if any, on the use of mobile communications or recording devices.

Policy Concerning Use of Turnitin: Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com (directly or via learning management system, i.e. Canvas) for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. Students who do not agree should contact the course instructor immediately.

Withdrawal/Refund Schedule: Students who stop attending their course(s) without submitting a completed [Add/Drop Course](#) form will receive a failing grade. Furthermore, students dropping to zero credits for the semester are considered withdrawn and must submit a completed [Leave of Absence](#) form from the School of Public Health's Office of Student Affairs. The School of Public Health refunds tuition only. Administrative and technology fees are non-refundable. You may find the Withdrawal/Refund Schedule on the School of Public Health website at: sph.rutgers.edu/academics/academic-calendar.html