Warsaw, January 2024

Syllabus for Introduction to Research Methods in Psychology

Lecturer: Joachim Kowalski, PhD (jkowalski@psych.pan.pl)

Course duration: 30 hours

Time&Place: Summer semester 2023/2024, Institute of Psychology, PAS (ul. Stefana Jaracza 1)

Goals and content:

The course will be devoted to research methods in psychology. We will cover a wide range of topics ranging from the basics of scientific method and research design through the principles of statistical data analysis to the recent challenges regarding reproducibility of research results. The questions of ethics in conducting psychological research will also be discussed.

Class schedule:

The course is divided into ten 3-hour meetings. Meetings will be held in the Institute of Psychology seminar room on Wednesdays at 9 am.

Class no	date	Topic/subject	Presentation papers
1.	28.02	Scientific method and research process	none
2.	6.03	Ethics in research	https://www.apa.org/ethics/code/ethics-code-2017.pdf
3.	13.03	Developing research ideas and formulating hypotheses	Scheel, A. M., Tiokhin, L., Isager, P. M., & Lakens, D. (2021). Why hypothesis testers should spend less time testing hypotheses. *Perspectives on Psychological Science*, *16*(4), 744-755.
4.	20.03	Operationalization and measurement of variables	McNeish, D., & Wolf, M. G. (2020). Thinking twice about sum scores. *Behavior research methods*, *52*, 2287-2305.
5.	27.03	Sampling methods	Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world?. *Behavioral and brain sciences*,

			33(2-3), 61-83.
6.	10.04	Study designs 1: Cross-sectional, longitudinal and other designs	Grosz, M. P., Rohrer, J. M., & Thoemmes, F. (2020). The taboo against explicit causal inference in nonexperimental psychology. *Perspectives on Psychological Science*, *15*(5), 1243-1255.
7.	17.04	Study designs 2: Experimental and quasi-experimental designs	Boot, W. R., Simons, D. J., Stothart, C., & Stutts, C. (2013). The pervasive problem with placebos in psychology: Why active control groups are not sufficient to rule out placebo effects. *Perspectives on psychological science*, *8*(4), 445-454.
8.	24.04	Statistical analyses	Lakens, D. (2013). Calculating and reporting effect sizes to facilitate cumulative science: a practical primer for t-tests and ANOVAs. *Frontiers in psychology*, *4*, 863.
9.	8.05	Knowledge aggregation – systematic review and meta-analysis	Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P. C., Ioannidis, J. P., ... & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: explanation and elaboration. *Annals of internal medicine*, *151*(4), W-65.
10.	15.05	Replicability crisis and open science	Ioannidis, J. P. (2005). Why most published research findings are false. *PLoS medicine*, *2*(8), e124.

Assessment/grading:

To pass the course, students are required to:

1. Attend the classes (possibility of 1 unexcused absence)
2. Present a paper (see column “presentation papers” above)
3. Pass a short final exam

Reading:

Students will be required to do some reading for each class – a chapter or a paper. Sample readings:

Borkovec, T. D., & Sibrava, N. J. (2005). Problems with the use of placebo conditions in psychotherapy research, suggested alternatives, and some strategies for the pursuit of the placebo phenomenon. *Journal of clinical psychology*, *61*(7), 805-818.

Borsboom, D., Mellenbergh, G. J., & Van Heerden, J. (2003). The theoretical status of latent variables. *Psychological review*, *110*(2), 203.

Cooper, H. E., Coutanche, M. N., McMullen, M. L., Panter, A. T., Rindskopf, D. & Sher, K. J. (2023). *APA handbook of research methods in psychology, Vol 1: Foundations, planning, measures, and psychometrics*. American Psychological Association.

Lakens, D. (2017). Equivalence tests: A practical primer for t tests, correlations, and meta-analyses. *Social psychological and personality science*, *8*(4), 355-362.

Nosek, B. A., Alter, G., Banks, G. C., Borsboom, D., Bowman, S. D., Breckler, S. J., ... & Yarkoni, T. (2015). Promoting an open research culture. *Science*, *348*(6242), 1422-1425.

Perugini, M., Gallucci, M., & Costantini, G. (2018). A practical primer to power analysis for simple experimental designs. *Revue Internationale de Psychologie Sociale*, *31*(1), 1-23.

Rohrer, J. M., Hünermund, P., Arslan, R. C., & Elson, M. (2022). That'sa lot to PROCESS! Pitfalls of popular path models. *Advances in Methods and Practices in Psychological Science*, *5*(2), 25152459221095827.

Watts, S. E., Turnell, A., Kladnitski, N., Newby, J. M., & Andrews, G. (2015). Treatment-as-usual (TAU) is anything but usual: a meta-analysis of CBT versus TAU for anxiety and depression. *Journal of affective disorders*, *175*, 152-167.

Note: this is a preliminary syllabus; it is subject to change