



DEPARTMENT OF NEUROBIOLOGY, CARE SCIENCES AND SOCIETY

H1F5556 Methods for Systematic Review, from Project Plan to Report, 3 credits (hec)

Metoder för systemisk litteraturöversikt - från projektplan till rapport, 3 högskolepoäng

Third-cycle level / Forskarnivå

Approval

This syllabus is approved by the The Committee for Doctoral Education on 2023-12-12, and is valid from Spring semester 2024.

Responsible department

Department of Neurobiology, Care Sciences and Society, Faculty of Medicine

Prerequisite courses, or equivalent

Course “Methods for Systematic Review - from Idea to Project Plan” or corresponding knowledge.

Purpose & Intended learning outcomes

Purpose

Systematic literature reviews are important for summarizing preceding scientific knowledge and experiences, and for identifying potential knowledge gaps. The aim of the course is to gain skills for performing a full systematic review, and to be able to evaluate the process critically. A secondary aim is to stimulate in-depth knowledge and understanding within the participants own research area.

Intended learning outcomes

After completing the course, the participants are expected to:

- 1) have developed skills to conduct a research synthesis,
- 2) be able to critically evaluate procedures for systematic reviews.

Course content

- Selection of studies
- Study quality assessment of the included studies (RoB)
- Tools for the reporting of systematic reviews (eg PRISMA)
- Data extraction of PICO, PEO, etc
- Assessment of the level of evidence (eg GRADE)
- Critical evaluation and discussion of weaknesses and strengths in their own and co-students' reviews.

Forms of teaching and learning

The course is a part-time digital course and includes 3 blocks (1-2 days each), including a final seminar day. Teaching and learning activities include lectures, independent work, peer-learning by evaluation of others' work and group discussions.

The focus of the blocks is to gain skills that are necessary to conduct a systematic review; e.g. selection and critically the risk of bias (RoB) of the included studies, extract important information from the included studies (PICO, PEO), assessing the level of evidence (GRADE) and how to report these (PRISMA). Moreover, we hope the students increase their understanding on the role of the chosen component/aspect within the participant's own doctoral project. For the final seminar, the participant writes an individual essay in the form of a systematic review according to our grading criteria and the guidelines of a potential journal to which the review could be submitted to. A co-student's examination assignment is discussed in the final examination.

Language of instruction

The course is given in English.

Grading scale

Pass (G) /Fail (U)

Compulsory components & forms of assessment

Compulsory components

- Active participation in group discussions online on selected course days
 - Performing the examination assignment and participate in the final seminar day
 - Provide peer feedback on course and examination assignments.
- Absence from the final seminar day must be compensated by a critical discussion (in writing) regarding another student's essay submitted to the final seminar.

Forms of assessment

The course is examined individually, orally and in writing, in the form of a literature review based on systematic approaches. To pass the course, the learning goals must be fulfilled, which requires active participation in compulsory parts, and an approved results for the following activities: 1) An individual essay in the form of a systematic review. The focus of this assignment will be on a) how the student has extracted and interpreted the data, b) how the student has

critically assessed the quality (RoB) of the included studies, c) in the discussion has critically assessed the pro's and con's of the procedures used in their own review, and d) has provided valuable input to a peer student's essay. 2) Active participation in the final seminar where the individual essay is presented and discussed.

Course literature

Booth, A., Sutton, A., Papaioannou, D. 2016. Systematic approaches to a successful literature review (2nd edition). Sage Publications Inc., London.

Cooper, H., Hedges, L.V., Valentine, J.C., 2009. The handbook of research synthesis and meta-analysis (2nd edition). Russel Sage Foundation, New York

Ryan R, Hill S, Prictor M, McKenzie J; Cochrane Consumers and Communication Review Group. Study Quality Guide. May 2013 <http://cccr.cochrane.org/author-resources> (2021-10-14).

Other resources:

<https://kib.ki.se/en/search-evaluate/systematic-reviews>

Booth A, Clarke M, Dooley G, Ghera D, Moher D, Petticrew M, Stewart L. The nuts and bolts of PROSPERO: an international prospective register of systematic reviews. *Syst Rev*. 2012 Feb 9;1:2. doi: 10.1186/2046-4053-1-2. PMID: 22587842; PMCID: PMC3348673.