



## Swedish Institute for Social Research

### Systematic Reviews

Advanced level, 7.5 ECTS

#### Instructors

Lars Brännström	F836	08-16 43 17	<a href="mailto:lars.brannstrom@sofi.su.se">lars.brannstrom@sofi.su.se</a>
Ida Borg	F979	08-16 29 73	<a href="mailto:ida.borg@sofi.su.se">ida.borg@sofi.su.se</a>

#### Course content

It is becoming more common that public policy interventions should be based on best available evidence. The purpose of a systematic review is to sum up the best available research evidence on a specific question. This is done by synthesising the results of several studies. Participants will explore the range of existing approaches to, and methods for, research synthesis. The course will provide hands-on experience of commonly used methods (including the procedures proposed by the Campbell/Cochrane Collaborations). The course uses material from a range of policy areas and will explore different kinds of review questions. Participants will be introduced to different methods for synthesising both a range of study designs and qualitative and quantitative data, although there is an emphasis on synthesising quantitative data (meta-analysis). To help participants consider the role played by systematic reviews in policy and practice decisions, this course also includes discussion of the opportunities and challenges that systematic reviews pose.

#### Entry requirements

Bachelors degree with a major in social sciences and English B or corresponding.

#### Learning outcomes

After having completed the course, students are expected to be able to:

- characterize and explain the steps in the systematic review process (problem formulation, identification of studies, data extraction, study quality appraisal, synthesis, dissemination).
- critically appraise, perform, and interpret meta-analyses of quantitative research evidence.



- understand the fundamental problems related to internal and external validity, and be able to reflect and argue for its consequences for applying social science research in practice.
- conduct oneself critical to the role played by systematic reviews in policy and practice decisions.

### **Course organization**

The course is offered full-time over five weeks. Course participants and instructors meet approximately twice a week for lectures, group discussions, computer-based exercises and/or seminars. The course is offered in English.

### **Instruction and examination**

Course work consists of group discussions, computer-based exercises and formative peer-assessments. All course work is based on collaborative work. Participation in group discussions and formative peer-assessments is therefore mandatory.

The course is examined through five individual assignments:

1. Protocol (project plan)
2. Evidence-grading of a primary study
3. Critical review of a meta-analytic study
4. Practical meta-analysis
5. Reality and complexity in evidence-based decision making

Assignment 1-3 are assessed as Pass or Fail. Assignment 4 is assessed according to the criteria Pass with distinction, Pass or Fail.

The score Pass indicates correct answers that may include minor mistakes but where methods are correctly used and interpreted. The score Pass with distinction is given when, in addition to above, the assignment is well presented (including tidy) and the answers are argued in a convincing and relevant way. An assignment which is handed in late will very rarely be graded Pass with distinction.

Assignment 5 is assessed according to the criteria detailed below.

*Criterion referenced assessment*

<u>Criteria</u>	<u>Concepts and basic assumptions</u>	<u>Results and conclusions</u>	<u>The link between results and recommendation</u>	<u>Approach</u>
<u>Good</u>	Detailed and critical discussion of concepts and basic assumptions	Clear and informed description of results and conclusions	Clear, detailed and critical description of the link between results and recommendation	Independent approach to the literature
<u>Some shortcomings</u>	Clear description of concepts and basic assumptions	Clear description of results and conclusions	Clear and detailed description of the link between results and recommendation	Open approach to the literature
<u>Fail</u>	Unclear or incorrect presentation of concepts and basic assumptions	Unclear or incorrect description of results and conclusions	Unclear or incorrect description of the link between results and recommendation	Lacks an independent approach to the literature

An assignment which is handed in late will very rarely be graded Good.

The final grade is based on the following criteria:

To receive grades A-E, students have to pass all assignments.

To get **A (excellent)**, Assignment 5 has to be Good on all criteria and Assignment 4 was passed with distinction.

To get **B (very good)**, Assignment 5 has to be (i) Good on all criteria except one and Assignment 4 was passed with distinction.

To get **C (good)**, Assignment 5 has to be Good on at least two criteria

To get **D (satisfactory)**, Assignment 5 has to be Good on at least one criteria

To get **E (sufficient)**, Assignment 5 has some shortcomings on all criteria.



To get **Fx (insufficient)**, Assignment 5 fails on at least one criteria and/or the student has not passed assignments 1-4 and/or the student has not participated in collaborative group work.

To get **F (fail)**, Assignment 5 fails on at least one criteria and/or the student has not passed assignments 1-4 and/or the student has not participated in collaborative group work.

### **Transitory regulations**

A student who has been awarded the grade Fx or F twice by the same instructor on the course has the right to have his/her next exam being evaluated by another instructor. If the student so wishes, he/she should contact the director of undergraduate studies.

### **Required readings**

#### Books

- Borenstein, M. et al. (2009). Introduction to meta-analysis. Chichester: John Wiley & Sons.
- Davies, H. T. O., Nutley, S. M. & Smith, P. S. (Eds.) (2000). What works? Evidence-based policy and practice in public services. Bristol: The Policy Press.
- Petticrew, M. & Roberts, H. (2006). Systematic reviews in the social sciences: a practical guide. London: Blackwell.

#### Articles, chapters, Campbell/Cochrane reviews

- Altman, D. G. et al. (2001). The revised CONSORT statement for reporting randomized trials: explanation and elaboration. *Annals of Internal Medicine*, 134: 663-694.
- Andrée Löffholm, C., Brännström, L., Olsson, M. & Hansson, K. (2012). Treatment-as-usual in effectiveness studies: What is it and does it matter? *International Journal of Social Welfare*, doi: 10.1111/j.1468-2397.2012.00870.x.
- Aas, R. W. & Alexanderson, K. (2012). Challenging evidence-based decision-making: a hypothetical case study about return to work. *Occupational Therapy International*, 19: 28-44.
- Boaz, A. & Pawson, R. (2005). The perilous road from evidence to policy: five journeys compared. *Journal of Social Policy*, 34(2): 175-194.
- \*Bogenschneider, K. & Corbett, T. J. (2010). Evidence-based policymaking. Insights from policy-minded researchers and research-minded policymakers (ch. 1, 7, 9). New York: Routledge Academic.

- Britten, N. et al. (2002). Using meta-ethnography to synthesise qualitative research: a worked example. *Journal of Health Services Research and Policy*, 7(4): 209-215.
- Gendrau, P. & Smith, P. (2007). Influencing the “people who count”. Some perspectives on the reporting of meta-analytic results for prediction and treatment outcomes with offenders. *Criminal Justice and Behavior*, 34(12): 1536-1559.
- GRADE Working Group (2004). Grading quality of evidence and strength of recommendations. *British Medical Journal*, 328(19): 1-8.
- Harris, R. J. et al. (2008). metan: fixed- and random-effects meta-analysis, *The Stata Journal*, 8: 3-28.
- Henggeler, S. et al. (2006). Methodological critique and meta-analysis as Trojan horse. *Children and Youth Services Review*, 28(4): 447-457.
- Lieberson, S. (1992). Einstein, Renoir, and Greely: some thoughts about evidence in sociology. *American Sociological Review*, 57: 1-15.
- Littell, J. (2005). Lessons from a systematic review of effects of multisystemic therapy. *Children and Youth Services Review*, 27(4): 445-463.
- Littell, J. et al. (2005). Multisystemic therapy for social, emotional, and behavioral problems in children and adolescents aged 10-17. Campbell Systematic Review 2005:1. Oslo: The Campbell Collaboration.
- Littell, J. (2006). The case for multisystemic therapy: Evidence or orthodoxy? *Children and Youth Services Review*, 28(4): 458-472.
- MacLure, M. (2005). ‘Clarity bordering to stupidity’: Where’s the quality in systematic review? *Journal of Education Policy*, 20(4): 393-416.
- Moher, D. et al. (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of Internal Medicine*, 151(4): 264-270.
- Mullen, E. J. (2006). Choosing outcome measures in systematic reviews: critical challenges. *Research on Social Work Practice*, 16(1): 84-90.
- Pawson, R. et al. (2005). Realist review – a new method of systematic review designed for complex policy interventions. *Journal of Health Services Research and Policy*, 10(S1): 21-34.
- Smedslund, G. et al. (2006). Work programmes for welfare recipients. Campbell Systematic Review 2006:9. Oslo: The Campbell Collaboration.
- Smith, G. C. S. & Pell, J. P. (2003). Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials. *British Medical Journal*, 327: 1459-1461.
- Sterne, J.A.C. et al. (2001). ”Meta-analysis in Stata”, in Egger, M., Davey Smith, G. & Altman, D. G. (Eds.), *Systematic Reviews in Health Care: Meta-Analysis in Context*. 2<sup>nd</sup> edition. London: BMJ.
- Stroup, D. E. et al. (2000). Meta-analysis of observational studies in epidemiology: a proposal for reporting. *JAMA*, 283(15): 2008-2012.
- Vedung, E. (2010). Four waves of evaluation diffusion. *Evaluation*, 16(3): 263–277.



\* For sale at Akademibokhandeln, Frescati.

### Recommended readings

Higgins, J. P. T. & Green, S. (Eds.) (2008). *Cochrane handbook for systematic reviews of interventions*. Hoboken: Wiley-Blackwell. (<http://www.cochrane-handbook.org/>)

Saini, M. & Shlonsky, A. (2012). *Systematic synthesis of qualitative research*. Oxford: Oxford University Press.

Shemilt, I. et al. (Eds.) (2010). *Evidence-based decisions and economics. Health care, social welfare, education and criminal justice*. 2<sup>nd</sup> edition. Chichester: Wiley-Blackwell.

Sterne, J. A. C. (Ed.) (2009). *Meta-analysis in Stata: an updated collection from the Stata Journal*. College Station: Stata Press.

### Preliminary schedule

Date	Room	Lecture/seminar	Required readings	Teacher
Mon 5/11, 10-12	F379	Systematic reviews for public policy and practice; The systematic review process	Petticrew & Roberts, ch. 1-2 (+app. 1); Davies et al, ch. 1-2 (skim ch. 3-8+10); Bogenschneider & Corbett, ch. 1+7; Vedung	LB
Thu 8/11, 10-12	F371	Defining the scope of relevant evidence; Formulating an answerable review question; Identifying relevant studies and outcomes	Petticrew & Roberts, ch. 3-4; Davies et al, ch.12-14; Mullen	LB
Mon 12/11, 10-12 13-15	SUL	Advanced information searching  Group 1 Group 2		Guest 1

Thu 15/11, 10-12	F379	Systematic methods for study quality appraisal, data extraction, evidence-grading and making recommendations	Petticrew & Roberts, ch. 5; GRADE Working Altman et al; Moher et al; Stroup et al	LB
Tue 20/11, 10-12	F379	Systematic methods for research synthesis	Borenstein et al., Part 1-4, 6, 9; Petticrew & Roberts, ch. .6-7; Britten et al; Gendrau & Smith; Pawson et al	LB
Thu 22/11, 9-12	B397	Meta-analysis in Stata	Harris et al; Smedslund et al; Sterne et al	LB, IB
Wed 28/11, 10-11  11-12	F331	Systematic reviews in practice	Petticrew & Roberts, ch. 8; Bogenschneider & Corbett, ch. 9	Guest 2  Guest 3
Fri 30/11, 10-12	F363	Reality and complexity in policy and practice decision making: lessons from a systematic review	Littell et al; Littell x 2; Henggeler et al; Andrée Löfholm et al	LB, IB
Wed 5/12, 10-12	F355	Making a reality of an evidence-based policy and practice: prospects and pitfalls	Petticrew & Roberts, ch. 9; Davies et al, ch. 15; Aas & Alexanderson; Boaz & Pawson; Lieberson; MacLure; Smith & Pell	LB



Guest 1: Personnel from Stockholm University Library (SUL).

Guest 2: Lena Lindahl, PhD, Swedish Medium-term Survey 2011, Ministry of Finance.

Guest 3: Sten Anttila, PhD, Swedish Council on Health Technology Assessment.