

Equity Checklist for Systematic Review Authors

This checklist is intended for use by systematic review authors **planning and conducting** reviews with a focus on health equity. We define equity focused reviews as those that:

1. Can assess effects of interventions targeted at disadvantaged population;
2. Can assess effects of interventions aimed at reducing social gradients; and
3. Can assess effects of interventions not aimed at reducing inequity but where it is important to understand the effects of the intervention on equity.

To ensure transparency and completeness of **reporting** of your systematic review, we recommend you follow the new [PRISMA-E 2012 reporting guidelines](#) for systematic reviews with a focus on health equity. Additional guidance is available in the paper [Health equity: evidence synthesis and knowledge translation methods](#).

This is a living document and will be updated.

“The term ‘inequity’ has a moral and ethical dimension. It refers to differences which are unnecessary and avoidable but, in addition, are also considered unfair and unjust.”

- Whitehead, 1991

*Disadvantage can be measured across categories of social differentiation, using the mnemonic **PROGRESS-Plus**. **PROGRESS** is an acronym for **Place of Residence, Race/Ethnicity, Occupation, Gender, Religion, Education, Socioeconomic Status, and Social Capital**, and **Plus** represents additional categories such as **Age, Disability, and Sexual Orientation**.*

- Evans, 2003 and Oliver, 2008

1. Develop a logic model

Eq-1. Is there potential for differences in relative effects between advantaged and disadvantaged populations? E.g. Are children from lower income families less likely to use bicycle helmets? (Royal, 2005) Yes No

Eq-2. **Have** you developed a logic model to illustrate the hypothesized mechanism of action (that is, the pathways through which the intervention is expected to affect health equity)? Yes No

2. Define disadvantage and for whom interventions are intended

Eq-3. Were interventions aimed at the disadvantaged or at reducing the gradient across populations? Disadvantage is defined across PROGRESS-Plus categories. E.g. School meals aimed at children in poor cities (Kristjansson, 2007). Yes No

Eq-4. Have the inclusion/exclusion criteria and data extraction used structured methods to assess categories of disadvantage (e.g. socioeconomic status, sex, race/ethnicity, etc.)? Yes No

Eq-5. Have you appropriately described sociodemographic characteristics (e.g. socioeconomic status, sex, race, etc.), given the details in the included studies? Yes No

Eq-6. Have you described the sociodemographic characteristics of withdrawals and dropouts? Yes No

3. Decide on the appropriate study design(s)

Eq-7. Are your selection criteria for study designs fit for purpose given the focus on equity? Yes No

Eq-8. Do your included study designs include the contextual information relevant for the category/categories of disadvantage under consideration? Yes No

Eq-9. Is the rationale for the choice of included study designs related to equity research questions clearly stated/justified? Yes No

4. Identify the appropriate outcome(s)

Eq-10. Have you include relevant and important outcomes to address equity questions and/or assess effects in disadvantaged populations (defined across one or more PROGRESS-Plus elements) (e.g. considered in the logic model)? Yes No

5. Evaluate processes and understand context

Eq-11. Have you included a process evaluation that considers the disadvantaged? Yes No

6. Analyse and present the data

Eq-12. Have you planned / conducted analyses to assess differences in effects for disadvantaged populations (e.g. across one or more PROGRESS-Plus factors) where appropriate? Yes No

Eq-13. Did you plan to synthesize findings on health inequities and present both relative and absolute differences? Yes No

7. Discuss applicability of findings

Eq-14. Have you discussed the implications of differences in absolute or relative effects for the disadvantaged population of interest? Yes No

Eq-15. Have you considered the inclusion/exclusion criteria of the primary studies, and how that affects generalizability? Yes No

Eq-16. Has your search include databases, terms, and concepts relevant for the equity question under consideration? Yes No

Recommendations for applying the equity lens to systematic reviews

From: Tugwell P, Petticrew M, Kristjansson E, Welch V, Ueffing E, Waters E, Bonnefoy J, Morgan A, Doohan E, Kelly MP. Assessing equity in systematic reviews: realising the recommendations of the Commission on Social Determinants of Health. *BMJ*. 2010 Sep 13;341:c4739. doi: 10.1136/bmj.c4739.

1. Develop a logic model

Equity-oriented systematic reviews should include a logic model developed a priori to elucidate hypotheses for how the intervention (whether a policy or a programme) was expected to work, and how factors associated with disadvantage (social stratification) might interact with the hypothesised

mechanisms of action. Reviews should incorporate input from relevant stakeholders in defining the research question(s) and developing the logic model.

Example—Logic models were developed by the Canadian Collaboration for Immigrant and Refugee Health to guide systematic reviews on interventions for immigrants and refugees (Tugwell, 2010b).

2. Define disadvantage and for whom interventions are intended

Equity-oriented systematic reviews should define how disadvantage and equity will be operationalized and the population selection criteria based on the question being asked. The reviewer must consider whether a group is truly disadvantaged in the study setting. In the case of targeted interventions, the population sample should be restricted to disadvantaged populations or settings in which most people are disadvantaged. In the case of universal interventions, the reviewer must be able to present data that are stratified by one or more categories of differentiation. When data on disadvantage are not available, proxy measures may be considered.

Example—Baseline nutritional status was identified as a proxy for socioeconomic disadvantage in a Campbell-Cochrane systematic review of a school feeding programme (Kristjansson, 2007).

3. Decide on the appropriate study design(s)

Equity-oriented systematic reviews should define selection criteria for study designs according to their “fitness for purpose” rather than following an evidence hierarchy (Petticrew, 2003). The rationale for the fitness for purpose should be clearly stated and explained.

Example—A systematic review of the effects of tobacco pricing on smoking behaviour did not find controlled trials but did find informative observational studies. Nine of 42 studies examined aspects of equity (such as lower versus higher income smokers, ethnicity): these suggested that pricing might have a greater effect in people with lower incomes. This observational evidence base is informative about the differential effects of a major tobacco control intervention, whereas reviewing the evidence from randomised controlled trials alone would produce an “empty review”—a review with little to say about the policies’ effects.

4. Identify the appropriate outcomes

Equity-oriented systematic review outcomes should be chosen based on importance and relevance of outcomes across “PROGRESS-Plus” categories.

Example—Including “Return to work” as an outcome after tuberculosis treatment might not be meaningful to a person who has little chance of employment because of social disadvantage.

5. Evaluate processes and understand context

In equity-oriented systematic reviews, a process evaluation should be undertaken, using qualitative methods to assess why, how, when, and under what circumstances an intervention is most likely to be effective. This requires extracting sufficient information from primary studies, and possibly obtaining additional grey literature on the intervention. Furthermore, systematic reviews could include additional historical and contemporary material to enrich an analysis of contextual factors that may enhance or limit the effectiveness of the intervention.

Example—In school feeding programmes, was the energy value of the food supplements sufficient to change outcomes? (Kristjansson, 2007)

6. Analyse and present the data

Equity-oriented systematic reviews should analyse data on gaps, gradients, and targeted interventions based on the fitness for purpose of the summary measure and availability of data (see Evans, 2001 for a thorough discussion of gap and gradient analysis). Where possible, both relative and absolute measures should be presented (Carling, 2009). Absolute differences are likely to be higher in disadvantaged groups.

Example—The harvest plot can be used to analyse the presence of gradients in effect size from complex and diverse studies (Ogilvie, 2008).

7. Discuss applicability of findings

Equity-oriented systematic reviews should discuss the applicability, transferability, and external validity of findings for disadvantaged groups of interest according to accepted criteria as well as consider context (such as using theory and judgment). Thorough attention to understanding context and process evaluation will aid judgments about applicability.

Example—A Cochrane review assessing the equity implications of training lay health workers concluded that, even though 32 of 48 studies were conducted in high income countries, their findings might well be applicable to lower income countries more generally because the findings were consistent across all settings (Lewin, 2005).

Resource Materials**1. Develop a logic model**

Anderson LM, Petticrew M, Rehfuess E, Armstrong R, Ueffing E, Baker P, et al. Using logic models to capture complexity in systematic reviews. *Research Synthesis Methods* 2011;2(1):33-42.

<http://onlinelibrary.wiley.com/doi/10.1002/jrsm.32/abstract>.

Harris RP, Helfand M, Woolf SH, Lohr KN, Mulrow CD, Teutsch SM, et al. Current methods of the US Preventive Services Task Force: a review of the process. *Am J Prev Med* 2001;20(suppl 3):21-35S. [http://www.ajpmonline.org/article/S0749-3797\(01\)00261-6/abstract](http://www.ajpmonline.org/article/S0749-3797(01)00261-6/abstract).

2. Define disadvantage and for whom interventions are intended

Evans T, Brown H. Road traffic crashes: operationalizing equity in the context of health sector reform. *Inj Control Saf Promot* 2003;10:11-2.

<http://www.tandfonline.com/doi/abs/10.1076/icsp.10.1.11.14117>.

Oliver S, Kavanagh J, Caird J, Lorenc T, Oliver K, Harden A, et al. Health promotion, inequalities and young people's health. A systematic review of research. EPPI-Centre, 2008.

<http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2410&language=en-US>.

3. Decide on the appropriate study design(s)

Petticrew M, Roberts H. Evidence, hierarchies, and typologies: horses for courses. *J Epidemiol Community Health* 2003;57:527-9. <http://jech.bmj.com/content/57/7/527.abstract>.

4. Identify the appropriate outcome(s)

Kemp JR, Mann G, Simwaka BN, Salaniponi FM, Squire SB. Can Malawi's poor afford free tuberculosis services? Patient and household costs associated with a tuberculosis diagnosis in Lilongwe. *Bull World Health Organ* 2007;85(8):580-5. <http://www.who.int/bulletin/volumes/85/8/06-033167/en/>.

5. Evaluate processes and understand context

Greenhalgh T, Kristjansson E, Robinson V. Realist review to understand the efficacy of school feeding programmes. *BMJ*. 2007 Oct 27;335(7625):858-61.

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Pawson R, Greenhalgh T, Harvey G, Walshe K. Realist review – a new method of systematic review designed for complex policy interventions. *J Health Serv Res Policy* 2005;10(1):21-34

Noblit GW, Hare RD. Meta-ethnography: synthesizing qualitative research in systematic reviews.

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Thomas J, Harden A. Methods for the thematic synthesis of qualitative research in systematic reviews.

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6. Analyse and present the data

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7. Discuss applicability of findings

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This checklist may be used and distributed. We would appreciate the following citation:

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