

ORIGINAL ARTICLE

Toward a theory-led metaframework for considering socioeconomic health inequalities within systematic reviews

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Abstract

Objectives: To develop a theory-led framework to inform reviewers' understanding of what, how, and why health care interventions may lead to differential effects across socioeconomic groups.

Study Design and Setting: A metaframework approach combined two theoretical perspectives (socioeconomic health inequalities and complex interventions) into a single framework to inform socioeconomic health inequality considerations in systematic reviews.

Results: Four theories relating to complexity within systematic reviews and 16 health inequalities intervention theories informed the development of a metaframework. Factors relating to the type of intervention, implementation, context, participant response, and mechanisms associated with differential effects across socioeconomic groups were identified. The metaframework can inform; reviewer discussions around how socioeconomic status (SES) can moderate intervention effectiveness during question formulation, approaches to data extraction and help identify a priori analysis considerations.

Conclusion: The metaframework offers a transparent, practical, theory-led approach to inform a program theory for what, how, and why interventions work for different SES groups in systematic reviews. It can enhance existing guidance on conducting systematic reviews that consider health inequalities, increase awareness of how SES can moderate intervention effectiveness, and encourage a greater engagement with theory throughout the review process. Crown Copyright © 2018 Published by Elsevier Inc. All rights reserved.

Keywords: Systematic review; Equity; Methodology; Framework; Program theory

1. Introduction

Interventions that may be effective in improving the overall health of a population, may inadvertently increase health inequalities [1–4] (i.e., differences in health status between individuals or populations that are avoidable and unjust [5]). White et al. ([1], p.68) label these as “intervention-generated inequalities,” that is, “all processes in the planning and delivery of an intervention have the potential to widen inequalities within the target population,

distinguished by a range of factors, such as gender, age, ethnicity, or SEP [socioeconomic position]”. Such intervention-generated inequalities occur, for example, when an intervention improves the health of higher socioeconomic status (SES) groups at a faster rate than in lower SES groups (i.e., higher SES groups will benefit first, then lower SES groups will catch up) [1,2].

All health care interventions have the potential to impact on health inequalities. The net impact of an intervention may be positive, negative, or have no discernible impact (see Fig. 1). Such an impact may be the result of either intended or unintended effects [1]. It is imperative, therefore, that all reviews consider whether it is likely that their

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What is New?**Key findings**

- A metaframework was developed to help reviewers formulate an a priori understanding of the potential for their review findings to be moderated by socioeconomic status.

What this adds to what was known?

- The metaframework enhances existing guidance on conducting systematic reviews that consider health inequalities by offering reviewers practical guidance in identifying factors and mechanisms associated with differential effects of health care interventions across socioeconomic groups.

What is the implication and what should change now?

- Use of the metaframework promotes an explicit, practical, theory-led approach to inform a program theory for if, what, and how interventions work for different socioeconomic status groups.

review findings have the potential to impact on health inequalities [1,3,6].

Guidance on conducting systematic reviews that consider health inequalities encourages reviewers to develop an understanding, or “program theory”/logic model, from the outset of their review, of what works, for disadvantaged populations, under what circumstance [7–10]. However, much of the guidance assumes that reviewers can recognize a priori, what, how, and why interventions may result in differential effects across different SES populations [11]. Consequently, within the review guidance, there is a lack of detail on the specific factors and mechanisms (i.e., responses and changes in an individuals’ reasoning and actions) associated with the intervention pathway that may result in differential effects across SES groups (see Table 1).

Furthermore, in explaining the low reliability of a plausibility algorithm designed to predict relative differences in effectiveness of interventions across SES populations, Welch et al., ([12], “Discussion”) suggest that it “may be due to multicomponent questions covering several factors, and potential confusion of access to health care, prognostic factors, and treatment—covariate interactions.” This suggests that reviewers need to recognize first, what factors relating to an intervention pathway (e.g., the intervention, participant characteristics and access) may moderate intervention effectiveness and second, if, how, and why these factors may result in differential effects across different SES groups.

Empirical evidence, however, suggests that reviewers struggle to understand how interventions under review may impact on health inequalities [12–15]. If reviewers

are not able to recognize such issues, then they may be less likely to incorporate health inequality considerations in systematic reviews [11]. Thus, a framework that offers the potential to facilitate the identification of factors and mechanisms associated with what, how, and why interventions may work across different SES groups, may help reviewers to operationalize the guidance on conducting systematic reviews that consider health inequalities.

Such a framework also has the potential to help reviewers identify the types of data to extract, inform a priori analysis of which factors are associated with differential effects, and identify possible explanatory factors (i.e., mechanisms) for why some interventions may widen, narrow, or have no impact on the health inequality gap. Furthermore, when evidence is lacking from primary research of an impact on socioeconomic health inequalities, the framework could provide a structure within which to hypothesize both the likely applicability of review findings and the potential for an intervention to indirectly widen or narrow socioeconomic health inequalities.

Given the lack of evaluation of differential effects of interventions across disadvantaged populations, Whitehead ([5], p.477) states that it is “imperative to adopt a theory-based approach to guide the development and implementation of actions aimed at tackling social inequalities in health.” Several theories and frameworks exist to help reviewers hypothesize how interventions may or may not work across socioeconomic groups, but few distinguish between the factors associated with the intervention pathway that may result in differential effectiveness. However, theories relating to complexity in systematic reviews of complex interventions can help reviewers to identify such factors. For example, Rohwer et al. [16], highlight factors relating to participants, intervention design, context, and implementation that reviewers should consider when hypothesizing how an intervention may or may not work.

Therefore, in considering two theoretical perspectives, that is, health inequality interventions and complexity in systematic reviews of complex interventions within a single framework, we aim to map out the factors and mechanisms associated with the intervention pathway that may lead to differential effects across socioeconomic groups. In combining multiple theories into a single framework, we adopted a metaframework approach. This approach identifies both common and unique elements from across multiple theories to inform a single metaframework [17,18]. The objectives are to i) identify existing theories, guidance, and frameworks that consider what, how, and why health care interventions may lead to differential effects across socioeconomic groups, ii) consider the strengths and limitations of these theories, iii) identify key factors and mechanisms within the theoretical literature associated with what, why, and how interventions may result in differential effects across SES groups, and iv) develop a theory-led metaframework to inform reviewers’ understanding of what, how, and why health care interventions may lead to differential effects across socioeconomic groups.

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