

# Lumping versus splitting in systematic reviews: feasibility for researchers versus relevance for practice and policy?

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## Background

A clearly defined research question is key in developing a systematic review (SR). However, within international development there is a tendency to work with very broad SR questions. This consideration in defining research questions is known as “splitting versus lumping”:

**Splitting:** focusing on a single, well-defined intervention



**Lumping:** broadens the scope at the intervention, outcome and study type level



## Objectives

To reflect on the pros and cons of lumping versus splitting in a mixed-methods SR on the effectiveness and implementation of WASH (water, sanitation, hygiene) promotion programs to promote behaviour change in low and middle income countries (De Buck et al., 2017).



A **lumping approach** was used for the SR, including a variety of:

- *promotional interventions:* community-based approaches, sanitation and hygiene messaging, social marketing, theory-based approaches
- *outcomes:* behavioural factors, behaviour outcomes, health outcomes
- *methods of outcome measurement:* observations versus self-reported
- *timing of outcome measurement:* during, < 12 months, or > 12 months project implementation
- *study types:* experimental studies ((quasi-) randomized controlled trials) and observational studies (case-control and cohort studies)

## Methods

The **researchers' perspective** was considered based on:

1. total time spent to conduct the SR
2. the number of included studies
3. the number of outcomes for which data were extracted



The **practitioners' perspective** was obtained by 2 face-to-face consultations with funders, field practitioners and policy makers:

1. one during the protocol phase
2. one after the SR results were analyzed/synthesized



## Results

Argument	Example mixed-methods SR	Splitting	Lumping
<b>Researchers: time and resource availability</b>	<ul style="list-style-type: none"> <li>■ Funded by 3ie and WSSCC, but co-funding (Belgian Red Cross, Effective Health Care Research Consortium) necessary</li> <li>■ Timeline for development of SR: 12 months from protocol development to first draft SR (608 working days)</li> </ul>		
<b>Researchers: capacity to deal with complexity at various stages in the SR</b>	<ul style="list-style-type: none"> <li>■ Data extraction: 70 included studies; 27 different promotional approaches; 559 different outcomes; decision to create different categories of interventions and outcomes; difficulties to sort information in correct category</li> <li>■ Data synthesis: not possible to conduct meta-analyses because of high degree of heterogeneity</li> </ul>		
<b>Practitioners: innovation (the SR should not only confirm what is already known from practice)</b>	<ul style="list-style-type: none"> <li>■ Relative effectiveness of promotional approaches is important information, too narrow focus on one type of interventions will not generate innovative information</li> </ul>		
<b>Practitioners: correspondence with real life situation (in reality not 1 isolated intervention is implemented)</b>	<ul style="list-style-type: none"> <li>■ WASH promotional interventions in reality are combinations of different approaches, e.g. a “train the trainer” model, where NGO technicians train local community women to promote the behaviour change through social marketing and household visits, including use of food incentives</li> </ul>		
<b>Practitioners: relevance of factors influencing implementation</b>	<ul style="list-style-type: none"> <li>■ Very relevant to know barriers and facilitators of implementation, e.g. gender of implementer, involvement of the community, income generating activities ...</li> </ul>		
<b>Practitioners: simplicity of the analysis and presentation of results</b>	<ul style="list-style-type: none"> <li>■ Difficult for practitioners to interpret results of 43 separate forest plots</li> </ul>		

## Conclusions

It is crucial for researchers to consult with different stakeholders beforehand if they want to develop a policy-relevant SR. However, this should be balanced against time and resources available.

### References

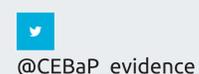
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### Funding

This review is supported and funded by the Water Supply and Sanitation Collaborative Council (WSSCC) in partnership with the International Initiative for Impact Evaluation (3ie), and co-funded by Belgian Red Cross and the Effective Health Care Research Consortium (this Consortium is funded by UK aid from the UK Government for the benefit of developing countries (Grant: 5242)).



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