



Steps for the development of a systematic review.

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Dear Editor:

In the latest issue of this journal, you published a letter with the title “*Systematic reviews, basic concepts*” (Aguilera-Eguía, 2019), which provided a definition of a secondary research design called Systematic Reviews (RS) with the following words: “*clear and structured summaries of the information that is available, whether on therapy, diagnosis or prognosis. They emerge principally in order to address to a specific clinical research question*” (Letelier et al., 2005). After that, SR were classified in two types: a) Qualitative and b) Quantitative. On the one hand, qualitative SR present the evidence in a descriptive manner, without the use of a statistical analysis. On the other hand, quantitative SR, also known as meta-analysis, use statistical techniques to combine the results into a single one-point estimator (Letelier et al., 2005). The letter ends with an analysis of the advantages and disadvantages of SR and the differences that they have when compared to Narrative Reviews (NR).

At present, there is an increasing interest in the development of SR, due to their great significance on clinical decision making. This has resulted in an exponential increase of this research design, which has led to the appearance of numerous articles containing serious methodological problems. As a consequence, such problems will have an effect on clinical decision making. Since SR are not free from these problems, if they are carried out without the pertinent carefulness, their final results might overestimate or underestimate the actual effect of the corresponding intervention.

Therefore, how can we develop SR? What steps should we follow? Developing SR is a quite complex and rigorous process. This might as well be certain for their interpretation on many occasions. This series of letters aims to present the basic concepts used in the development of SR. These concepts will be explained in simple terms, so that students, clinicians and researchers that are not familiarized with secondary research are able to understand the technical aspects involved in the development of SR.

Therefore, which are the steps for developing a SR? As a brief summary, a SR should consider the following steps:

1. To develop a research protocol: The first thing that is recommended when developing a SR is to generate its protocol. This step is crucial, since it will help to establish the most appropriate methods that will later be applied to the review. In order to register the SR's protocol, you might use PROSPERO (<https://www.crd.york.ac.uk/prospero/>).

2. To define a specific clinical research question (*according to the acronym P.I.C.O.T.; P: Patient or Population; I: Intervention; C: Comparison; O: Outcome; T: Type of study*) and the eligibility criteria of the studies to be included.

3. To carry out a thorough search and selection of the studies that answer the previously stated question.

4. To extract the data from the studies that met the eligibility criteria.

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5. To provide an analysis, a presentation and an interpretation of the results.

As a conclusion, the development of a SR is a complex and rigorous process that demands a large amount of resources, which translates into time and dedication of the developing team. A SR will always be limited by the amount and quality of the studies included. We should take into consideration that, as with any other research designs, a SR might be poorly designed, which may lead to wrong conclusions.

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