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Pilar González Gálvez (Dr)

Facultat de Ciències de la Salut Blanquerna, Universitat Ramón Llull, Spain

How to create a bibliographic review

As nurses we try our best to offer the best care we can to patients, family members and the population at large. To do this we base our efforts on results from research studies which help to reduce uncertainty and show the effectiveness of practices, their benefits, the lowest risk to and the greatest satisfaction by users. Evidence based practice (EBP) is the safest way of working in the different areas of health sciences with the consumption of scientific literature by nurses increasing.

The dictionary defines ''review'' as the action of ''examining something to check that it is complete'', ''in case it is appropriate to modify it''.[1] Review of the literature of a specific theme entails examining what has been published under the prism of the set target. This critical element is essential in the context of review and although there are definitions which refer solely to the documentary procedure of recovering published references on a theme, during a certain time period,[2] the majority stress that critical analysis includes review, evaluating the content of the publications relating to the study objective.[3]

Review of the literature therefore provides knowledge of the scope of the study, its relevance, enables a more finely tuned demarcation of the problem, exposes the weaknesses of previous studies and thus identifies new outlooks of study and even elements which had not been salient in the primary context and which have become evident from the review.

Types of bibliographic reviews

The literature offers several classifications regarding bibliographic reviews, so that according to different authors we may speak of four, eight or twelve types of reviews.[4] These classifications have evolved with implementation of the EBP, with types of review appearing that respond to the objectives of professional consumption.[5]

Over and above the traditional and absolutely clinical classification by Squires which identified descriptive, evaluative reviews of commented and case references,[6] there is now consensus in establishing a first basic arrangement based on systematisation of the process or its absence for distinguishing different categories which derive from this initial distinction.[4,7]

In this way, non systematic reviews, which are also called descriptive, traditional or narrative, are characterised by a non detailed specification of the review process, which does not facilitate its repetition and the results of which are difficult to verify. It is recommended that the information search process be described, to provide the descriptors used and the sources consulted, which may be of diverse typology in order to obtain a broad perspective on the theme.[7]

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E-mail address: pilargg@blanquerna.url.edu

Systematic reviews try to provide an answer to a very well structured initial question (PICO format[1]). Specification of the process and the selection criteria will be established a priori, with the designing of a protocol, to minimise bias which may otherwise occur during the review. If modifications need to be made to the protocol during this process, they must be justified. All the necessary methodological aspects are detailed so as to enable the repetition of the review process, verification of results and inference of conclusions and critical paired reading will be included in order to increase rigour.[8] There are systems which encourage the normalisation of systematic review studies. The *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) method includes 27 points and a flow diagram and its use facilitates the design of the review report, ensuring its transparency and detail.[7] We have other systems such as the *Scottish Intercollegiate Guidelines Network* (SIGN) or the *Critical Appraisal Skills Programme* (CASPe) which are useful for providing rigour to the process.

From these two great blocks, other types of reviews are distinguished:

- *Integrative or critical review*: this is useful for reaching a conclusion about a specific theme. It may be considered an intermediate stage between narrative and systematic review given that apart from specifying the search process the selection criteria of the studies are included. However, it does not ensure evaluation of aspects such as the risk of bias.[4]
- *Meta-analysis*: this is a statistical analytical technique with which the results of studies reviewed on a theme may be linked up.[7] It analyses original studies and randomised clinical trials and offers a highly detailed description of the whole process.
- *Review of synthesis or meta synthesis*: this is useful for probing a theme, it shows the most used patterns or methodologies for study and reveals aspects which have been poorly developed or those with a new focus.[4,5]
- *Panoramic or exploratory review*: this is recommended for an initial approach to a theme, identifying the essential elements and showing the aspects which require research. Some systematisation is included and therefore the process may be repeated but the quality of the documents is not exhaustively assessed. These reviews are often the starting point for subsequent systematic reviews.[5]

Applicability of bibliographic review

Conducting a bibliographic review has several uses, such as helping to take decisions, managing a specific clinical situation, supporting diagnosis or treatment choice and planning healthcare policies. Depending on the use we wish to pursue, we would select one type of review or another (see Table 1).

It is possible that we are interested in combining the available information on a theme in order to broaden it, determine the theoretical frameworks under which this question has been studied up until now, identify the variables associated or the most used methodologies in studying the problem. Maybe we wish to identify unknown elements relating to this theme in order to put forward new lines of research. Or we are simply interested in summarising knowledge in order to foster study of the subject.[6]

Stages of bibliographic review

There are 4 basic steps to follow for the creation of a bibliographic review which are: the definition of the objectives; the process of search; the organisation of information and the report writing.[9] Depending on the type of review to be made, several of these stages may be divided into actions comprising a section with a separate identity.

- *Definition of the objective*: the objective will be derived from the research question involved. This point is essential since the type of review to be made will depend on the nature of this objective. To respond to questions on the existing knowledge of a subject or the characteristics of a certain population, a descriptive, non systematic type of review could be created. If the idea was to establish the existing relationship between different study variables it is best to choose a systematic review of an analytical nature. Time is required for this phase which involves the creation of the review protocol constructed from relevant questions which will define the problem, the population, period, variables and all the elements involved in the review.
- *Process of information search*: this section was broadly developed in number 29, volume 4 of the Intensive Nursing journal, ''How to create a reference search strategy'', and therefore only the aspects most closely related to search result management are dealt with here. Firstly, the descriptors or key words of the research question will be identified so as to create the search strategy with them.[10] According to the objective of research the type of documents will be determined: the selection criteria of the articles, if required by the review; the sources to research and the limits of the search. The initial selection of documents will be made based on the title and abstract and with the resulting documents a second selection filter (by pairs) will be made based on the established analysis aspects. It is important to record all the documents which are filtered and the reasons for eliminations and to clearly demonstrate the development of the selected articles. Critical reading systems are currently used to facilitate the execution of the review and ensure the necessary transparency and rigour or the authors of the review may establish some aligned guideline questions with the review objective which ensure systematisation and help to identify the strong and weak points of the reviewed documents (Fig. 1).
- *Organisation of the search*: the organisation of documents is highly personal and each author may do this in one way or another whilst ensuring the order and accessibility of the information during the process. Conceptual maps may be used, or synthesis tables or fact sheets. The critical

[1] The PICO question format ensures the presence of essential elements: Population; Intervention; Comparison and Outcomes.

Table 1 Main characteristics and uses of bibliographic reviews. Pilar González.

	Types of reviews					
	Narrative	Integrative	Panoramic	Systematic	Meta analysis	Meta synthesis
Usefulness	Academic study background: broadens perspective	Academic study background: reaches general conclusions	Academic study background: identify gaps	Provide evidence on specific issues	Relate specific issues of diverse studies	Generate theory and consider new outlooks
Objective	Identify and analyse knowledge on a broad, non exhaustive theme	Probes into a theme, generates new argument	Identify key ideas and typology of evidence	Analyse the effectiveness of a specific and exhaustive intervention	Verify the relationship between the results of different studies	Probe into the issue and find patterns
Responds to questions	Broad and non exhaustive	Broad and non exhaustive	Broad	Specific and exhaustive	Specific and exhaustive	Perceptions and attitudes
Systematic	NO	YES	YES	YES	YES	YES
Subject specification	Broad	Specific	Broad	Specific	Specific	Specific
Describes process	YES	YES	YES	Yes, very detailed	Yes, very detailed	YES
Selection criteria	Does NOT describe	YES	Does NOT describe	Yes, very detailed	Yes, very detailed	Relative to objective
Verification of result	Process CANNOT be reproduced	Process may be repeated and results verified relatively	Process may be repeated but results not verified	Process may be repeated and results verified absolutely	Process may be repeated and results verified absolutely	Process may be repeated and results verified relatively
Sources	Diversity of documents	Conceptual and critical articles	Inclusive diversity on-going research studies	Original studies	Original studies and random clinical trials	Diversity of documents
Evaluates bias risk	NO	NO	NO	YES	YES	NO

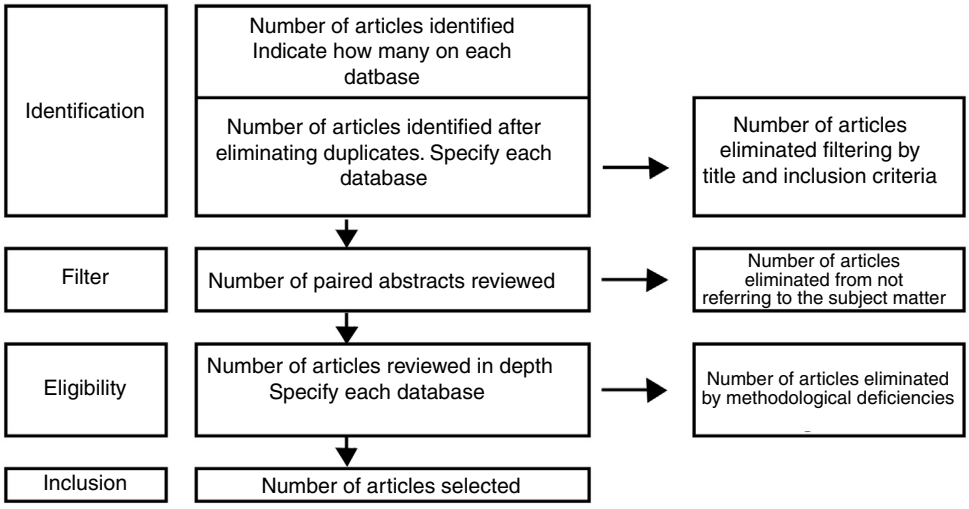

Figure 1 Diagram showing the selection process of articles.

Reading systems offer this material and its use is highly recommendable.

- *Report writing*: the standard structure of scientific studies will be respected. The introduction addresses the problem and research question. In the methodology section the process of search is explained and depending on the type of review, the selection criteria and critical reading process will be explained in greater or lesser specific detail. In the discussion the essential elements of the reviewed documents are highlighted, paying particular attention to the methods, biases if they exist, results obtained and any outstanding aspect. Finally, the conclusions derived from information analysis of the reviewed articles will be drawn, based on the objectives addresses and we will observe whether lines of investigation that are worthwhile pursuing appear.[6]

Evaluation of results

Quality should be guaranteed regardless of the review type executed. The demand for methodological rigour emerges and will be higher in systematic reviews since these should ensure internal validity or methodological quality, using studies which are free from bias and external validity to ensure the generalisation of results.

- The lists of validation facilitate critical reading, a totally necessary process for the evaluation and analysis of information, constituting a good method for maintaining rigour.
- In 1999 the *Quality of Reporting of Meta-analyses* (QUOROM) declaration appeared aimed at improving the creation of meta-analysis by means of a check list of the necessary characteristics of these studies. This tool was revised and updated, leading to the PRISMA declaration. There are other verification systems such as the *Cochrane Handbook for Systematic Reviews of Interventions*, Casper, SIGN, OSTEBA FLC 3.0, etc. which facilitate the functionability of the reviews, ensuring scientific rigour.[7]

It is not the aim of this study to analyse or compare the different tools of critical reading and we consider that in any case, the choice of tool should respond to the review objective and to the personal criteria of the author. However, we wished to supply the main characteristics of PRISMA and CASPe because they are the most frequently used tools.

The PRISMA declaration is indicated for systematic reviews, with or without meta-analysis on line. It includes 27 points structured into 7 sections: title, abstract, introduction, methods, results, discussion and financing. The author must verify compliance with these items included in each of these sections.

The CASPe system has versions for clinical trial, diagnostic studies and systematic reviews. The tool contains 10 questions, the first 2 of which are eliminatory and for an article to proceed the reply to the 2 initial questions must be in the affirmative.

For other types of review, some authors suggest following a list of questions to provide systematisation, guide the process and verify the relevance of the results.[9] We recommend putting forward questions about the review process, the content and structure of the reviewed articles and on the knowledge linked to this articles. The response to these questions will ensure that the objective of the review is well specified, as is identification of the sources, the search strategy and the selection criteria of the articles. Furthermore, the references of the articles will be confirmed to be current, that the most relevant studies have been identified and that the essential issues on the subject have been taken on board. Finally, confirmation will be made that all current knowledge has been combined and if there is a gap in knowledge this will be identified.[6]

Conclusion

Bibliographic reviews are an excellent method for developing disciplinary nursing knowledge. They are of great use both in the academic and clinical environment, being necessary for research and also for clinical practice. The EBP promotes the consumption and production of bibliographic reviews.

There are different types of reviews and carrying out one or another will depend on the desired objective. If a broad outlook on a subject is required, as the starting point for the creating of an academic study, a narrative review will be chosen. If we wish to identify a gap in knowledge about a problem to initiate a line of research in that regard, an integrative or panoramic review may be used.

When a response to specific questions is needed a systematic, detailed review is sufficient, and with rigorous evaluation of results to avoid bias and if statistical analysis is chosen for verification of the relationship of study results, a meta analysis should be used, and the PRISMA declaration should be taken into account.

Finally, if a new theory needs to be generated or other study outlooks to be considered, a syntheses or Meta synthesis review is optimum.

In all cases the utmost rigour of results is essential to increase disciplinary knowledge.

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