

## Towards thirty years of evidence-based practice (III): A critical reflection on the health research.

Hacia treinta años de práctica basada en evidencia (III): Una reflexión crítica sobre la investigación en salud.

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The core of evidence-based practice (EBP) is, precisely, evidence, so most of the clinical and managerial skills that must be developed to integrate EBP into the provision of health services are related to its production, discovery, evaluation, and application, and this, in turn, is closely linked to research. For this reason, the efforts to try to clarify which could be the most adequate evidence, according to the types of problems to be solved, and more feasible to obtain, according to the available resources, as well as to guide a more numerous and diverse novel quality research, are key aspects of any initiative intended to make evidence the general focus of attention in any given health system.

However, the dissemination of EBP has exposed a series of problems, which have become major barriers to its better use, among these, the fact that the task of knowledge production necessary for clinical and managerial decision-making, and even those related to the formulation and implementation of policies in the sector, has not been carried out, in its entirety, with the required quality and scope. This is a consequence of multiple factors, for example, the proliferation of pseudoscientific studies focused on the analysis of unreliable data using inappropriate methodological designs, the insufficient articulation of basic research and applied research, and the scant attention paid to fields such as psychology or sociology in the processes of evidence construction in priority areas such as public health.<sup>1,2</sup>

Additionally, not all the efforts and resources that were invested in these years to produce evidence were used to carry out the most robust types of studies. For example, in the regional context, a study, in which 113 dental articles published in local scientific journals indexed in the Scientific Electronic Library Online were analyzed, revealed that only 8 (7.1%) were experimental studies, 7 of which corresponded to randomized controlled trials.<sup>3</sup>

Of course, the example above accounts for the characteristics of a very small segment of health research, not only limited to a particular area but also limited by specific local circumstances. It is a fact that trends have not been uniform since they have varied depending on factors such as the place, the moment, the clinical or preventive area, the topic addressed, and many others, including some of enormous weight associated with the economic interests that underlie the industrial development of drugs,

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biomaterials, high-tech equipment, and other products with direct applications in patient care. However, even in the best of cases, the production of knowledge in that vast and critical field of science has exposed important flaws from the point of view of its suitability for obtaining highly reliable evidence. This is confirmed by a study that evaluated 238 research papers, from a broader context, published in 2015 in the *New England Journal of Medicine*, one of the scientific journals with the greatest credibility and influence globally in the medical field. In such research, although experimental studies accounted for 70.6%, these did not have the same quality standards in terms of bias control, and only some included strategies such as randomization, or the use of the double-blind method.<sup>4</sup>

It is true that not all the evidence required in health systems can be produced by studies as robust as randomized controlled trials, and even in areas such as public health, designs such as observational ones have reemerged by virtue of the nature of the interventions that are usually carried out.<sup>5</sup> But there is no doubt that, due to the weight that experimental designs have in the general framework of evidence production, there are many aspects that need to be improved in terms of this type of research at the global scale.

This not only involves the purely methodological aspects, but also the process of dissemination of results, since, as Ghersi *et al.*,<sup>6</sup> point out, not all of the studies are published, and not all those that are made public include all the findings obtained, adding biased information to the body of available evidence. This is a problem that the World Health Organization has tried to address with the consolidation of the International Clinical Trials Registry Platform, and the establishment of guidelines so that dissemination of knowledge is carried out ethically and expeditiously.<sup>7</sup> Additionally, the recommendation of some standards made by a group of important international organizations related to health research has been added to those initiatives.<sup>8</sup>

Be that as it may, it is positive in itself that these almost thirty years of dissemination and progressive adoption of EBP have served to highlight and generate more and more awareness about the importance of these and other problems related to research in the field. For example, the fact that not all those responsible for making clinical and managerial decisions and those related to the design and implementation

of health policies have the necessary competencies to undertake or coordinate the production of scientific knowledge that, in addition to being valid, is relevant from the resolute and preventive points of view to fill the gaps of quality evidence in matters that are not very attractive to researchers or are scarcely linked to the aforementioned economic interests. Regarding the latter, Knottnerus *et al.*,<sup>2</sup> indicate that mechanisms are necessary to ensure a much more responsible funding of health research and should be included in the plans, in which these interests are not yet given priority.

However, as pointed out by the same authors, the importance of such interests as motivators and catalysts for the production of knowledge and innovations in the field should not be underestimated. The balance between these and those of society could make cooperation between actors in the industrial, governmental, educational, scientific, welfare, and community domains more feasible, and this, in turn, would facilitate the design and implementation of good policies for the construction of evidence.

In any case, this greater awareness of those weaknesses in research linked to the production of evidence in the health systems has been bringing about certain changes in the sectoral management of science and technology and, therefore, in the undertaking of research work within this field. The numerous initiatives that have been promoted in these years to contribute in one way or another to the production and dissemination of high-quality evidence are clear examples of these changes. One such initiative is The Cochrane Collaboration, created to achieve this goal through consciously independent work not related to any commercial or economic interests.<sup>9</sup> This is reflected in a global strategy that aims, among other things, to produce systematic reviews and other syntheses of research results, assuring quality, relevance and timely dissemination, to inform health decisions around the world, and ensure that evidence is made more accessible and useful.<sup>10</sup>

Even the Global Forum on Research and Innovation for Health, formerly known as Global Forum for Health Research, has aimed towards achieving this objective in low and middle-income countries. They recognize that close to 85% of the sectoral production of knowledge of the greatest importance, and the one given priority in the most influential scientific journals, has been

carried out by researchers from developed nations. Consequently, they have designed new strategies for the production of evidence that can be translated into viable and sustainable interventions in low and middle-income countries.<sup>11</sup>

All the above gives an idea of the extent to which the very notion of "evidence" has been transforming the way of understanding the production of knowledge and its role in improving the health of the population, and it has also led to the introduction of certain improvements in the ways of producing evidence.

However, the substantial increase in the effectiveness of this activity, as key support of the interventions with which it intends to contribute to the resolution of health problems, especially from perspectives that go beyond the individual, will depend on the design and successful implementation of policies that not only give prominence to research within health systems, but also make it a more pertinent task and, consequently, establish its results as the element that links the different areas of decision-making, from the clinical to the formulation of the sectoral policies themselves.

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