

Evidence Based Care Journal

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The online version of this article can be found at
http://ebcj.mums.ac.ir/article_6732_960.html

Evidence Based Care Journal 2016 06:79 originally published
online 01 April 2016

Online ISSN: 2008-370X

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EVIDENCE BASED CARE



A Reflection on Research, Theory, Evidence-based Practice, and Quality Improvement

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Received: 14/02/2016

Accepted: 13/03/2016

Evidence Based Care Journal, 6 (1): 79-80

Recently, use of research, theory, evidence-based practice (EBP), and quality improvement (QI) has increased dramatically in the professional manuscripts and discourses of the health related literature. However, inadequate knowledge and inability to recognize the differences between these processes have led to uncertainty in some of these practices.

Elucidation of such processes is of paramount importance for students of different branches of health sciences, registered nurses, and even scholars. As such, certain distinctions have to be outlined in the methodologies and goals of these scientific processes.

The principal objective of research, around which all the other goals revolve, is to produce new knowledge and/or add to the existing body of knowledge in a specific area of science. This could be the knowledge that is directly applicable for practice or the knowledge that needs further verification before application. The process of research has been well illuminated in the literature. Scientific research methods are based on a research problem definition, which is used to formalize a research protocol in order to answer the research question (1). One example of a research question is as follows:

“Does the use of sitters prevent hospitalized elderly patients from falling?”

Research is defined as the systematic inquiry to generate new knowledge and refine or validate the existing knowledge regarding a specific subject.

Theorizing aims at the formulation and systematization of research findings and knowledge in order to define a certain phenomenon or problem methodically (2). In this process, logical and interconnected concepts, statements, and propositions are manipulated to describe, explain, predict or control the phenomenon. Therefore, research findings should be presented in the form of theories (scientific and systematic description of knowledge) and asserted hypotheses in qualitative and quantitative research approaches, respectively (3). In other words, research knowledge and findings resemble the effective substances of a medicine, which must turn into different forms in order to be used in medical practice effectually. Accordingly, theory and theorizing are considered the cornerstones of every scientific discipline. In the positivist approach towards science, theory comes before research in all academic achievements.

On the other hand, the most recent paradigms have recognized and substantially emphasized the significance of EBP as an inherent and definitive index to assess the quality of professional healthcare practice.

EBP is an attempt to answer clinical questions through evaluating the existing evidence (1). Using EBP, the clinician applies the most credible evidence available in order to deliver the necessary care procedures under all circumstances. While scientific evidence is considered a main component of the overall structure of EBP, other sources should be taken into account as well.

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The fundamental components of EBP methodology are embedded in the PICO model, which is used to frame the EBP question. PICO is a leading technique in EBP and is defined as follows: P (identification of patient or population problem to specify the main concern, complaint, disease or health status of the patient), I (identification of the intervention used to address the problem), C (comparison of the main alternatives of the intervention), and O (recognition of the expected outcome). Systematic search strategy is known as the root of the evidence obtained from research, theories, and clinical literature, as well as the clinical knowledge that is based on the opinion of experts.

Therefore, the foremost sources of evidence are research, theory, and theory-based research findings. If EBP is separated from research and theory, it has been disconnected from its origin and is devoid of meaning and scientific value. Nevertheless, some health care researchers tend to neglect this intrinsic and essential relationship, insisting on EBP without considering the significance of conducting accurate research and devising a proper theory as the foundations of the evidence, outcomes, and products of qualitative research. This is an outright diversion from the subject of accurate research, which is against the principles of EBP.

An important distinction between research/theory and EBP is that EBP accounts for the preferences of patients with respect to the type of intervention. In this regard, an example of a PICO question is as follows:

“In hospitalized elderly patients (P), how does a bed alarm (I) compared to the use of sitters (C) affect the rate of falling (O)?”

EBP adopts a problem solving approach based on the most reliable evidence, clinical expertise, and patient preferences to answer the question above.

In the field of health care, QI is applied to improve the quality of delivering care locally. In QI, the first step is to recognize the care delivery problem and address it at a local level, which is followed by efforts to resolve the problem. Some of the most common approaches used in QI include Plan-Do-Study-Act (PDSA) cycles, Six Sigma, and lean methodologies. An example of a QI question is as follows:

“What are the causes of the high patient fall rates? How could we reduce the percentage of patient falls in our hospital unit?”

Overall, the QI method uses relevant data to monitor the outcomes of care processes in order to design and examine the changes via improving the applied methods, which increases the quality and safety of healthcare systems constantly.

While each process is associated with its unique characteristics, overlaps are likely to appear between each of the two processes. For instance, in the EBP process, if one discovers (theory) that evidence is inadequate to implement a certain intervention, it highlights the need for research on that specific subject. Similarly, QI may lead to the identification of new questions, which could be used for research purposes. All the discussed processes, as well as their scientific and professional dimensions, are essential to nursing disciplines in healthcare systems.

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