

Evidence-Based Practice in Physiotherapy: Challenges, Clinical Reasoning, and Strategic Pathways in Developing Contexts

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Evidence-Based Practice (EBP) has become a fundamental paradigm in modern physiotherapy, highlighting the integration of the best available research evidence with clinicians' professional expertise and patient values to guide informed clinical decision-making. Since its formal integration into the health sciences, Evidence-Based Practice (EBP) has been extensively advocated as a means to improve patient outcomes, enhance professional accountability, and optimize the efficiency of healthcare resource utilization [1]. Although these expected advantages exist, the integration of EBP from theoretical models into everyday physiotherapy practice remains uneven and difficult within the industry. These difficulties are especially evident in low- and middle-income nations, such as Indonesia, where challenges like restricted access to high-quality evidence, differences in educational training, and systemic limitations continue to influence clinical practices [2]. In this scenario, analyses based on perspectives are crucial to go beyond standard descriptions of EBP and to critically assess how evidence is interpreted, negotiated, and implemented in actual physiotherapy settings [3]. This article, therefore, delves into the essential conceptual foundations, clinical reasoning processes, and strategic pathways associated with EBP in physiotherapy. It draws on both educational and clinical experiences to underscore opportunities for more contextually responsive and sustainable implementation.

In the field of physiotherapy, Evidence-Based Practice (EBP) is founded on the combination of high-quality research evidence with minimal bias, the professional expertise of clinicians, and the active participation of patients in making clinical decisions. This three-part model emphasizes that research evidence alone is not enough to direct practice; instead, evidence must be critically evaluated, contextualized, and interpreted through clinical reasoning that considers individual patient cases, preferences, and sociocultural backgrounds [3]. Clinical expertise empowers physiotherapists to integrate empirical evidence with experiential knowledge, thereby facilitating adaptive decision-making in complex and uncertain clinical environments [4,5]. Moreover, the incorporation of patient values aligns evidence-based practice (EBP) with the principles of patient-centered care, reinforcing shared decision-making as a crucial mechanism for translating evidence into interventions that are both meaningful and acceptable [6]. In developing healthcare systems, where resource limitations and variability in service delivery are prevalent, this interpretive and contextual dimension of EBP becomes particularly vital. It underscores that effective evidence-based physiotherapy is not merely the application of guidelines but a dynamic reasoning process that is responsive to real-world clinical constraints.

Clinical reasoning is defined as the cognitive and reflective processes employed by physiotherapists to gather, interpret, and synthesize clinical information, thereby facilitating evidence-based decision-making. Within the framework of evidence-based practice (EBP), clinical reasoning includes both analytical processes, such as hypothesis testing and outcome evaluation, and intuitive processes that evolve through clinical experience and pattern recognition [4,5]. These reasoning processes enable clinicians to tailor research evidence to individual patient contexts, particularly in complex musculoskeletal and rehabilitation cases, where standardized protocols may not adequately address patient variability. Shared decision-making (SDM) brings clinical reasoning into evidence-based practice (EBP) by incorporating patient viewpoints into the decision-making process. Through SDM, physiotherapists discuss the available treatment options, explain the possible benefits and risks, and assist patients in making clinical choices that align with their values, preferences, and life situations [6]. In healthcare environments with limited resources, effective SDM improves patient-centered care and bolsters the ethical and practical use of EBP by ensuring that clinical decisions are informed by evidence and suitable for the context.

Although Evidence-Based Practice is widely supported, numerous obstacles still hinder its successful application in physiotherapy. One of the main issues is the limited availability of high-quality research evidence, especially in clinical environments where access to journal subscriptions is restricted and there is a dependence on unverified online information sources [1]. Additionally, many physiotherapists, despite having a generally positive view of EBP, report lacking the skills and confidence needed for critical appraisal and evidence synthesis [2]. These challenges are further exacerbated by system-level factors, such as healthcare reimbursement models that emphasize service quantity over quality, which may unintentionally discourage evidence-based decision-making and reflective practice. To address these barriers, it is imperative to implement coordinated and multilevel strategic approaches. This includes the incorporation of evidence-based practice (EBP) competencies into both undergraduate and continuing professional education, enhancing institutional access to high-quality evidence resources, and establishing policy frameworks that incentivize quality- and outcome-based physiotherapy care. In developing healthcare contexts, such strategies are crucial for transforming EBP from a theoretical ideal into a practical and sustainable element of routine clinical practice.

Evidence-based physiotherapy practice is a dynamic and interpretive process that extends beyond the mechanical application of research findings. Its effective implementation depends on the integration of high-quality evidence with robust clinical reasoning and meaningful patient engagement through shared decision-making. However, persistent barriers, such as limited access to evidence, gaps in appraisal competencies, and system-level incentives that prioritise service volume over value, continue to challenge the translation of EBP into routine clinical practice, particularly in developing healthcare contexts. Addressing these challenges requires coordinated strategies across education, clinical practice, and health policy that strengthen clinicians' reasoning capacities, support patient-centered decision making, and align healthcare systems with evidence-informed care. Therefore, advancing EBP in physiotherapy demands methodological rigour, contextual awareness, and structural support to ensure sustainability and clinical relevance.

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