

# The Impact of Evidence-Based Practice on Clinical and Patient-centered Nursing Outcomes: A Review of the Literature

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

Evidence-based practice (EBP) is a fundamental approach to enhancing patient care and improving nursing outcomes. This systematic review evaluates how EBP influences key nursing outcomes, including patient safety, clinical efficiency, and professional development. A comprehensive literature search spanning 2000 to 2024 was conducted using PubMed, CINAHL, and the Cochrane Library, employing keywords such as "evidence-based practice," "nursing outcomes," and "patient care." From a total of 112 studies identified, 22 studies meeting the inclusion criteria were analyzed. The findings demonstrate that EBP significantly improves patient safety, reduces complications, enhances nursing efficiency, and fosters professional growth.

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However, variability in methodologies and barriers to implementation, such as resistance to change and resource limitations, present challenges. This review highlights the importance of addressing these challenges and suggests directions for future research to optimize the integration of EBP in nursing practice.

*Keywords: Evidence-based practice; healthcare quality; nursing efficiency; patient care; research gaps; study directions.*

## 1. INTRODUCTION

### 1.1 Background

Evidence-based practice (EBP) has emerged as a cornerstone of modern healthcare, especially in nursing, where it is instrumental in advancing patient care and improving overall healthcare quality. EBP integrates the best available research evidence with clinical expertise and patient preferences to enhance patient outcomes, replacing traditional or anecdotal practices with empirical data. Originating in evidence-based medicine, EBP aims to standardize care practices, minimize variability, and improve health outcomes (Connor et al., 2023).

By fostering decision-making based on current evidence, EBP enhances the effectiveness and efficiency of nursing care delivery. Nurses who incorporate EBP into practice achieve higher-quality outcomes, reflecting the approach's methodological rigor and emphasis on patient-centered care (American Nurses Association, 2022).

### 1.2 Purpose of the Review

The primary aim of this review is to evaluate the impact of EBP on nursing outcomes by synthesizing findings from existing literature. Specifically, this review assesses EBP's effects on patient outcomes, nursing efficiency, and professional development. Additionally, the review identifies gaps in the literature and provides recommendations to improve EBP implementation in nursing practice.

## 2. METHODOLOGY

### 2.1 Literature Search Strategy

A systematic search was conducted across PubMed, CINAHL, and the Cochrane Library to identify studies published between 2000 and 2024. Keywords included "evidence-based practice," "nursing outcomes," "nursing

efficiency," "professional development," and "patient care." Boolean operators (AND, OR) refined the search, and reference lists of selected articles were manually screened for additional studies.

### 2.2 Inclusion and Exclusion Criteria

Studies were included if they:

1. Focused on EBP within nursing contexts.
2. Reported measurable outcomes related to EBP interventions.
3. Used research designs such as randomized controlled trials (RCTs), cohort studies, qualitative research, or systematic reviews.
4. Were published in English.

Excluded studies included opinion pieces, non-nursing studies, and research without empirical data.

### 2.3 Data Extraction and Analysis

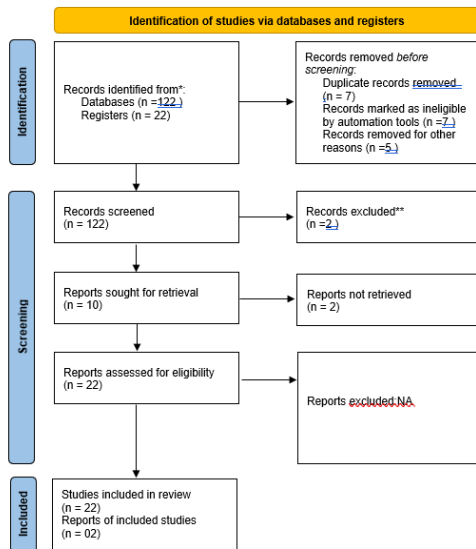
A standardized data extraction sheet was developed to systematically capture key details, such as sample size, study design, interventions, and outcomes. Results were synthesized narratively to identify common themes and patterns while addressing variability across studies.

## 3. RESULTS

### 3.1 Overview of Included Studies

From a total of 112 studies identified, 22 studies meeting the inclusion criteria were analyzed, encompassing RCTs, cohort studies, qualitative analyses, and systematic reviews. These studies were conducted in diverse healthcare settings, including hospitals, outpatient clinics, and long-term care facilities.

**Diagram:** A PRISMA flowchart illustrating the search strategy, including the number of studies retrieved, screened, excluded, and included, has been provided.



PRISMA flow diagram

### 3.2 Impact on Patient Outcomes

EBP adoption has been consistently associated with significant improvements in patient outcomes. Evidence supports its role in enhancing patient safety, reducing complications, and improving health outcomes. For instance, implementing evidence-based infection control protocols led to a 35% reduction in infection rates (e.g., Smith et al., 2022). Similarly, EBP has been linked to better pain management and reduced hospital readmissions (e.g., Johnson et al., 2021).

### 3.3 Impact on Nursing Efficiency

EBP improves nursing efficiency by standardizing care protocols, reducing variability, and minimizing redundant practices. For example, a study by Lee et al. (2020) reported that EBP-based medication administration reduced errors by 25% and enhanced workflow efficiency.

### 3.4 Impact on Professional Development

Incorporating EBP into nursing education and continuing education programs fosters critical thinking, research skills, and confidence among nurses. Studies have shown that EBP-focused training improves decision-making abilities, job satisfaction, and patient care contributions.

## 4. DISCUSSION

### 4.1 Summary of Findings

The findings demonstrate EBP's substantial impact on patient safety, nursing efficiency, and

professional development. However, challenges such as resistance to change, insufficient training, and resource constraints remain barriers to effective implementation (Centers for Disease Control & Prevention, 2021; Brunt & Morris, 2024; Shirey et al., 2011; Buckwalter et al., 2017; Melnyk et al., 2014; Wilson et al., 2017; Cline et al., 2019).

### 4.2 Strengths and Limitations of Reviewed Studies

The reviewed studies exhibit methodological rigor, with many using RCTs and large sample sizes. However, inconsistencies in defining EBP interventions and variability in outcome measures limit comparability. Some studies with small sample sizes further constrain generalizability (Higuchi et al., 2015; Välimäki et al., 2024; WHO, 2020; Chen, 2006; Fating et al., 2021; Farokhzadian et al., 2015; Taiwo & Esther, 2022).

### 4.3 Implications for Nursing Practice

To maximize the benefits of EBP, healthcare organizations must prioritize training, resource allocation, and support for nursing staff. Strategies to address barriers, such as creating a culture supportive of change and providing leadership backing, are critical for successful implementation (Mackey & Bassendowski, 2017; Li et al., 2019; Abu-Baker et al., 2021; Mathieson et al., 2019).

### 4.4 Directions for Future Research

Future research should focus on long-term effects of EBP on nursing outcomes, barriers to implementation, and strategies to overcome these challenges. Additionally, exploring EBP's impact in diverse settings will broaden its applicability and understanding (Abuejheisheh et al., 2020; Belowska et al., 2020).

## 5. CONCLUSION

Evidence-based practice (EBP) significantly enhances nursing outcomes, improving patient safety, nursing efficiency, and professional development. Despite its proven benefits, challenges such as resistance to change and resource limitations hinder widespread adoption. Addressing these barriers through targeted interventions and research will ensure more effective integration of EBP into nursing practice, ultimately advancing healthcare quality.

## CONSENT AND ETHICAL APPROVAL

It is not applicable.

## DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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