**EVIDENCE-BASED PRACTICE**

**PROF. A.L. MAHALAKSHMI**

 Professor Cum Vice Principal, Shri Sathya Sai College of Nursing, Sri Balaji Vidyapeeth (Deemed to be University), Puducherry. mahaprabhupm@gmail.com, 9884421981, Orchid id: 0000-0002-5902-8572

**ABSTRACT:-**

Evidence-based practice is widely acknowledged as a crucial factor in enhancing healthcare quality and patient outcomes. Although the purposes of nursing research, which involves generating new knowledge, and evidence-based nursing practice, which entails using the best available evidence as the foundation for nursing care, may seem distinct, there is a growing trend of research studies aiming to translate evidence into practice effectively. It is evident that merely having research-based evidence is insufficient; it must also be effectively implemented within an enabling context to achieve significant results. In nursing, evidence-based practice entails delivering comprehensive, high-quality care based on the most current research and knowledge, rather than relying on traditional methods, advice from colleagues, or personal beliefs. By implementing evidence-based practice in nursing, the gap between theory and practice is bridged, leading to innovative patient care that incorporates the latest healthcare discoveries. Evidence-based practice is likely to be a recurring theme throughout a nursing career, with its origins tracing back to Florence Nightingale. She, as the iconic founder of modern nursing, gathered data and drew conclusions about the link between unsanitary conditions and deteriorating health, a concept that remains relevant today. Over the past century, there have been remarkable advancements in both our way of life and our thinking. Human ingenuity and technology have collaborated to propose solutions that were unimaginable just 50 years ago. Many diseases have been conquered, countless lives have been saved from premature death and disability, and the quest for improved healthcare solutions continues. Evidence-based practice in nursing emphasizes the idea that medical practices should be continually developed and adapted based on an ongoing cycle of evidence, theory, and research. As changes in practice trigger further research, the theories derived from that research serve as evidence to drive additional changes in practice.

Key Words: Health care ,Quality, Research ,Holistic Care.

**I) INTRODUCTION:**

Evidence-based practice entails the need to examine and evaluate the most recent research findings. In the context of nursing, this knowledge gleaned from evidence-based research may suggest the need to modify an established nursing care protocol in your practice. It is advisable to engage in discussions regarding your findings with your nurse manager and team before implementing any changes. Once you have secured their support and ensured alignment with your facility's policies and procedures, you can merge these evidence-based nursing interventions with the values of your patients to deliver the most effective care. Dr. David Sackett's classic definition of Evidence-Based Practice (EBP) defines it as "the conscientious, explicit, and prudent utilization of the latest best evidence when making decisions concerning an individual patient's care." This approach involves integrating the clinician's individual expertise, the best available external clinical evidence derived from systematic research, and the unique values and circumstances of the patient, along with the specific characteristics of the healthcare practice. To simplify, evidence-based practice essentially employs a data-driven, scientific method in making decisions related to patient care. It necessitates practitioners to critically assess evidence and systematically gather information about relevant events. Evidence-based practice formalizes the most effective clinical practices, policies, and procedures.

**II) IMPORTANCE OF EVIDENCE-BASED PRACTICE :**

The significance of Evidence-Based Practice (EBP) lies in its commitment to delivering the most efficient healthcare, with the primary goal of enhancing patient outcomes. Patients rightfully anticipate receiving care that is grounded in the most current and reliable evidence. EBP fosters a spirit of inquiry among healthcare professionals, prompting them to question the rationale behind their practices: Why am I approaching this in this particular manner? Is there evidence available to guide me in a more effective direction? As healthcare providers, a fundamental aspect of delivering a professional service is ensuring that our actions are informed by the most trustworthy evidence. Furthermore, EBP contributes to the responsible allocation of limited healthcare resources and ensures that pertinent evidence informs decisions related to the allocation of funding for healthcare services. It establishes a framework for evidence-based nursing interventions that serve as valuable guidelines for making decisions regarding patient care. This process involves the integration of the best external evidence, the clinician's clinical expertise, and the patient's values and expectations. Here is a breakdown of the steps involved in this process:

1. Begin by formulating a clear and specific question related to the patient's condition, setting an ultimate goal, such as improving a specific procedure tailored to their needs.
2. Gather the most reliable evidence by conducting a thorough search for clinical articles from reputable and credible sources.
3. Evaluate the collected resources to determine their validity, quality compared to established evidence standards, and relevance to the patient's situation.
4. Apply the evidence to clinical practice by making informed decisions that draw upon both your nursing expertise and the newly acquired information.
5. Continuously assess the outcomes to gauge the effectiveness of the treatment and consider its applicability to other patients.

**III) PURPOSE OF EVIDENCE-BASED PRACTICE:**

Evidence-Based Practice (EBP) can be summarized as follows:

1. **Staying Informed:** EBP serves as a structured guide to help practitioners stay up-to-date with the latest trends in medical treatment, even in the face of an overwhelming amount of research.
2. **Guiding Practice:** It provides practitioners with the best available evidence to inform and guide their clinical practice.
3. **Encouraging Inquiry:** EBP promotes a mindset of inquiry among healthcare professionals, encouraging them to question established practices.
4. **Validating Decision-Making:** EBP supports clinical decision-making by combining clinical experience with evidence, lending credibility to the choices made.
5. **Incorporating Patient Values:** It ensures that patient values and individual circumstances are integrated into the decision-making process, emphasizing patient-centered care.

Nursing research serves as the foundation for Evidence-Based Nursing (EBN) practice. While definitions of Evidence-Based Practice (EBP) vary, it encompasses various forms of evidence, including research findings, knowledge from basic science, clinical expertise, and expert opinions. However, practices rooted in research findings are more likely to yield desired patient outcomes across different settings and geographical locations. Staff nurses play a critical role in translating research-based changes into clinical practice. Resource availability may vary depending on the healthcare environment, impacting the ability to critically evaluate and apply research findings at the point of care. They are ideally positioned to support new nurses in their transition to evidence-based practice. In the EBP approach, healthcare professionals use the best available evidence to make clinical decisions for individual patients. This process involves intricate and thoughtful decision-making that takes into account not only the available evidence but also patient characteristics and preferences’ emphasizing the integration of theory-guided practice at the core of nursing, combining relevant outcome-driven practice with the art and science of caring and healing. While EBP requires nurses to base treatment on scientific research, its roots can be traced back to nursing pioneer Florence Nightingale, even though it gained prominence in medicine during the late 1980s. It is founded on the principle that healthcare professionals should base their practice on sound information derived from research findings and scientific advancements. There is a continual emphasis on developing nursing knowledge through research and theory building to enhance the foundation of nursing practice. Nursing relies on various forms of knowledge due to its characteristics encompassing social, behavioral, and biological sciences. Implementing treatment plans after analysing research reviews is a vital step in evidence-based nursing practice. All those involved in patient care use research information to formulate treatment plans. EBP signifies a shift toward a more scientifically informed approach to patient care, while still acknowledging the importance of personal experience, wisdom, and patient relationships in delivering successful nursing care. The examples provided demonstrate the significant role that research evidence plays in healthcare practices, emphasizing that different individuals and populations may respond differently to interventions.

**IV) BENEFITS OF EVIDENCE-BASED PRACTICE IN NURSING**

Evidence-based practice in nursing offers a multitude of advantages beyond ensuring the currency and relevance of healthcare practices, both for you as a nurse and for your patients:

1. **Enhances Patient Outcomes:** It promotes favourable patient results by guiding care based on the most reliable evidence.
2. **Reduces Healthcare Costs:** By preventing complications, it helps in lowering healthcare expenses.
3. **Advances Nursing Science:** It contributes to the growth of the nursing field by fostering scientific exploration.
4. **Facilitates Technology Integration:** EBP allows for the seamless incorporation of new technologies into healthcare practices.
5. **Empowers Nurses:** It boosts nurse autonomy and decision-making confidence.
6. **Maintains Relevance:** EBP ensures the ongoing relevance of nursing practice through the integration of new interventions and care protocols.
7. **Offers Informed Decision-Making:** It provides scientifically backed research to support well-informed decision-making.
8. **Promotes Shared Decision-Making:** EBP encourages collaborative decision-making with patients in care planning.
9. **Improves Critical Thinking:** It enhances critical thinking skills among healthcare professionals.
10. **Encourages Lifelong Learning:** EBP fosters a culture of continuous learning and professional development.

**V) LEVELS OF EVIDENCE-BASED PRACTICE CAN BE CATEGORIZED INTO FOUR MAIN TIERS, EACH INFLUENCING CLINICAL DECISIONS DIFFERENTLY:**

* Level A draws evidence from randomized, controlled trials and is considered the most dependable.
* Level B relies on well-designed control trials without randomization.
* Level C comes into play when information about a condition is limited, utilizing evidence from consensus viewpoints or expert opinions.
* Level ML (multi-level) is typically employed in complex cases, drawing evidence from multiple sources among the other levels.

**VI) THE EVIDENCE-BASED PRACTICE (EBP) PROCESS ENCOMPASSES FIVE KEY STEPS:**

1. Formulate a question.
2. Access relevant evidence.
3. Evaluate the quality of the evidence.
4. Apply the evidence to clinical practice.
5. Assess and measure the effectiveness of the applied evidence.

The "5A's Cycle" within EBP involves assessing the patient's condition and prioritizing care-related questions, formulating specific clinical queries, gathering pertinent evidence, critically evaluating research findings, implementing evidence-based practices in patient care, and periodically reviewing performance. The cycle then begins anew with a reassessment of the patient and their care.

**VII) THE EBP PROCESS**

The process has evolved to incorporate various elements, including the best available research evidence, clinical expertise, the patient's unique values and circumstances, and the specific characteristics of the healthcare practice where the healthcare professional operates. Consequently, EBP involves more than just applying research evidence; it also entails leveraging one's experience, skills, and training as a healthcare professional while considering the patient's individual situation and values (e.g., social support, financial status) as well as the practice's context (e.g., budget limitations). This holistic integration of information is termed clinical reasoning. Engaging in EBP means making patient care decisions that take into account all four of these elements. Given the increasing pressures and demands on the healthcare system, particularly healthcare professionals, such as nurses, who are grappling with reduced staffing levels and budgets, EBP has become essential. This is compounded by heightened public awareness and legal challenges related to healthcare-associated issues, including superbugs, medical malpractice, suboptimal patient outcomes, and patient dissatisfaction, regularly reported in the media. Consequently, EBP has become a familiar concept and an imperative aspect of healthcare practice.



**Fig:1- THE EBP PROCESS CYCLE**

a) Explaining the Concept and Skills Gap The concept and the essential skills required for evidence-based practice (EBP) are often found to be lacking among practitioners. EBP is a systematic approach to healthcare that prioritizes the use of the best available evidence in conjunction with a clinician's experience and patient preferences and values to make informed decisions about care and treatment. Essentially, EBP provides practitioners with a structured framework to critically evaluate their daily practices, make necessary informed adjustments, and simultaneously contribute to the growth of their profession's knowledge base. Key steps underpinning this process have been outlined by Melnyk and Fineout-Overholt:

b) Focusing the Inquiry The initial step is of paramount importance. It's imperative to narrow down and define the specific area of focus from the outset. This involves formulating precise clinical questions related to the specific issue at hand. While these questions may arise daily in practice, ranging from fundamental care matters to more complex issues, they are sometimes overlooked or left unanswered in the midst of chaos. However, tools and frameworks are available to assist practitioners in asking and addressing such critical clinical questions, ensuring they receive the attention they deserve. Although some may find this step time-consuming, it ultimately leads to the formulation of focused and expedient questions, resulting in a targeted and efficient literature search.

c) Decision-Making Process With a clearly defined and focused question in hand, the subsequent step involves conducting a literature search that is not as broad or laborious as traditionally perceived. Instead of generating a large number of search results, potentially numbering in the hundreds and often irrelevant, practitioners are now able to obtain a small, select set of highly relevant papers for consideration. Various tools, often referred to as hierarchies of evidence, are available to help individuals, including novices, assess the quality of the collected evidence. Nevertheless, research findings cannot exist in isolation; they must be contextualized within the care setting, patient preferences, clinical expertise, and clinical judgment. The implementation of research findings alone, without due consideration of the care context, patient involvement, and clinician expertise, holds limited value and may not lead to improvements in care or outcomes.

d) Monitoring and Evaluation The EBP process extends beyond the implementation of specific care practices determined by the best available evidence. It is crucial to evaluate the implemented care or practice to gauge its true impact. This evaluation is essential for generating evidence from practice for practice. Examples of outcomes that may be assessed include infection rates, lengths of hospital stays, responses to psycho-social interventions, improvements in the quality of life, and patient or service-user satisfaction surveys. These outcomes collectively contribute to enhancing healthcare services and the patient experience.

**VIII) STEPS OF EVIDENCE-BASED PRACTICE**

A) Formulating a Question and Hypothesis In the initial step, a clinician poses a specific question related to clinical practice, such as whether exercise can reduce blood sugar levels. This question leads to the formulation of a hypothesis, such as "30 minutes of exercise three times a week will lower blood sugar levels, irrespective of diet or medication."

B) Gathering and Analyzing Evidence The next step involves collecting and examining the available evidence to test the hypothesis. The clinician collects data, analyzes it, and draws conclusions based on the evidence. The evidence is often structured using the PICO framework, which includes identifying the patient population, intervention, comparison, and desired outcomes.

C) Recording and Evaluating Findings Modern information systems capture and integrate various types of data, allowing clinicians to correlate and analyze information effectively. This process involves reviewing patient histories, objective observations, and test results to draw informed conclusions.

D) Engaging in the EBP Process Engaging in the EBP process involves six distinct steps, which have been adapted here for social work practice across multiple intervention levels:

1. Formulate a specific practice question.
2. Identify the best evidence to answer the question.
3. Critically appraise the evidence's quality and applicability.
4. Integrate the results of the critical appraisal with practice expertise and the unique circumstances of the client or client system.
5. Take appropriate actions based on the critical appraisal of evidence.
6. Monitor and evaluate outcomes related to both the practice decision/intervention and the effectiveness and efficiency of the EBP process.EBP is integral to optimizing patient outcomes and should be an essential part of daily practice, not an additional task. Addressing barriers and viewing them as adaptable boundaries can help advance the adoption of EBP in healthcare.

**Fig;2: Steps in EVP**

**X) CURRENT CHALLENGES AND OBSTACLES IN EVIDENCE-BASED PRACTICE (EBP)**

1. Insufficient Administrative Support.
2. Limited Time for Thoroughly Appraising Literature to Identify Relevant and Best Evidence.
3. Inadequate Knowledge of Evidence-Based Practice Strategies.
4. Doubts About Whether Evidence-Based Practice Will Improve Patient Outcomes Compared to Traditional Care.
5. Lack of Interest in Pursuing EBP.
6. Limited Confidence in Critical Appraisal Skills.
7. Feeling Overwhelmed by the Volume of Available Evidence.
8. Lack of Authority and Cooperation to Implement Changes in Patient Care Procedures.
9. Negative Beliefs, Attitudes, and Values Towards EBP.
10. Heavy Workloads for Nurses.
11. Absence of Support From Nurse Managers.
12. Conflicting Practice Goals Between Administrators and Staff Nurses.
13. Scarcity of EBP Mentors in Healthcare Systems.
14. Insufficient Resources and Understaffing.
15. Challenges in Understanding Statistical Analysis.
16. Limited IT and Search Skills Among Healthcare Professionals.

Nurses encounter significant difficulties when attempting to translate the best available evidence into clinical practice. For instance, research-based databases may lack comprehensiveness in various areas, and the continuous proliferation of information further complicates the process. Some of the barriers to EBP include:

**X) COMMON MISUNDERSTANDINGS ABOUT EVIDENCE-BASED PRACTICE**

Misunderstandings regarding evidence-based practice pose a significant hindrance to its acceptance and implementation. It is crucial to challenge and rectify these misconceptions, as they often stem from a limited or narrow grasp of evidence-based practice principles.

A) Misconception 1: Evidence-based practice disregards the professional experience of practitioners.

This misconception contradicts the essence of evidence-based practice, which emphasizes making decisions through the conscientious and judicious use of evidence from various sources, including practitioners' experiences. Evidence-based practice does not prioritize one source of evidence over another. Even the professional experience and judgment of practitioners can be a valuable source if deemed trustworthy and relevant. The insights from practitioners are essential in appropriately interpreting and applying evidence from other sources. For instance, when determining effective ways to share information with colleagues, organizational evidence may offer insights, but professional experience and judgment are vital in assessing which practices are sensible, particularly when working with colleagues with different skill levels. Similarly, scientific literature can help gauge the reliability of personal experience and judgment. Research indicates that years of experience in a technical field can lead to substantial expertise and tacit knowledge. Conversely, an individual with multiple unrelated jobs over the same period may possess less reliable expertise. Evidence-based practice revolves around using evidence from multiple sources rather than relying solely on one.

B) Misconception 2: Evidence-based practice solely revolves around numbers and statistics.

Evidence-based practice entails seeking and utilizing the best available evidence from various sources. It does not exclusively focus on numbers and quantitative data, even though many decisions involve numerical aspects. Becoming a statistician is unnecessary for engaging in evidence-based practice, but having a grasp of basic statistical concepts can be beneficial for critically evaluating certain types of evidence. Understanding principles like sample size, statistical significance versus practical significance, confidence intervals, and effect sizes can be achieved without delving into advanced mathematics. Evidence-based practice is not about conducting statistics but rather entails adopting statistical thinking as an important aspect.

C) Misconception 3: Managers lack the time for evidence-based practice and need to make quick decisions.

While some decisions demand immediate action, even rapid decisions necessitate reliable evidence. Making sound, swift decisions in scenarios like evacuating a leaking nuclear power plant or making an emergency landing relies on up-to-date knowledge and trustworthy instruments providing evidence about radiation levels or altitude. In cases where immediate decisions are vital, evidence-based practitioners anticipate the kinds of evidence required for quality decisions. However, the need for immediate decisions is usually an exception. Most management decisions span longer timeframes, often involving legal, financial, strategic, logistical, or organizational aspects that require time. This affords ample opportunities to collect and critically evaluate evidence about the problem's nature. In reality, time is generally not a hindrance to evidence-based practice.

D) Misconception 4: Each organization is entirely unique, rendering scientific literature evidence irrelevant.

Some practitioners believe that their organization is entirely unique, making research findings inapplicable. While organizations exhibit differences, they also encounter similar issues, often responding similarly. Most management problems, as suggested by management thinker Peter Drucker, are recurring issues presented as unique challenges. Organizations sometimes create myths of their uniqueness, but in reality, they tend to possess a mix of similarities and differences. Evidence-based practitioners should be flexible enough to acknowledge these similarities while considering unique qualities. Thoughtful practitioners may employ different approaches, such as individual financial incentives for independent salespeople and opportunities for development or engaging projects for knowledge workers. Evidence-based practice should account for these nuanced differences.

E) Misconception 5: In the absence of high-quality evidence, no action can be taken.

At times, there may be minimal or no high-quality evidence available, particularly in new management practices or technology implementation. In rapidly evolving organizational contexts, existing evidence may become less relevant or applicable. In such cases, evidence-based practitioners have no alternative but to work with the limited evidence available and supplement it through experiential learning. This entails pilot testing and treating actions as prototypes, systematically assessing outcomes through experimentation and critical reflection on what works and what doesn't.

F) Misconception 6: High-quality evidence provides definitive answers to problems.

Evidence does not serve as a standalone answer; it requires contextual understanding and critical evaluation. Evidence cannot speak for itself. It necessitates comprehension of the context and a critical mindset. Evidence-based practitioners do not make decisions based on conclusive, unquestionable information but rely on probabilities, indications, and tentative conclusions. Evidence does not dictate decisions; instead, it assists in making better-informed choices.

**XI) BENEFITS OF EVIDENCE-BASED PRACTICE**

There are several advantages to adopting evidence-based practice in healthcare, benefiting both providers and patients. Some examples include:

* Keeping providers updated: Evidence-based practice helps healthcare providers stay current with evolving treatment modalities, ensuring that they are informed about emerging practices.
* Enhancing clinical decision-making: Evidence-based practice guides providers in assessing and weighing different types of information, enabling them to make well-informed decisions on behalf of their patients.
* Promoting patient recovery: Evidence-based care expedites the diagnosis, treatment, and recovery processes, leading to improved patient outcomes.
* Mitigating risks: An evidence-based approach encourages providers to carefully evaluate the risks associated with various treatment options, leading to safer and more effective care.

**XII) APPLICATION OF EVIDENCE-BASED PRACTICE IN HEALTHCARE SETTINGS**

Implementing evidence-based practice in healthcare involves a six-step process:

1. Assess the need for change: Identify areas in which current practices require improvement based on the inadequacies of existing methods.
2. Locate the best evidence: Identify sources of evidence and assess their credibility and relevance to the research question.
3. Synthesize evidence: Analyze and compare the available sources to identify commonalities and differences in various approaches.
4. Design the change: Apply the synthesized evidence to develop a new practice that aligns with the updated understanding.
5. Implement and evaluate: Put the necessary changes into practice and assess their impact to acquire new evidence.
6. Integrate and sustain changes: Continuously reassess and update practices based on new evidence to maintain improvement.

**XIII) CONCLUSION**

Nursing research has always been aimed at enhancing patient care. Nurses should actively contribute to advancing evidence-based practice by addressing barriers, correcting misconceptions, and challenging current clinical practices. Healthcare administrators should foster a culture of intellectual curiosity and provide support for research endeavors. Evidence-Based Medicine (EBM) and Evidence-Based Nursing (EBN) both fall under the umbrella of evidence-based practice. Nurses are dedicated to providing holistic care, focusing on treating and collaborating with patients rather than merely working on them. The effectiveness of treatment is just one aspect of clinical decision-making; factors like patient acceptability and cost-effectiveness are also considered. Several obstacles to implementing evidence-based practice have been identified, and nurse administrators play a pivotal role in fostering an EBP culture within healthcare facilities.

**XIV) REFERENCE:**

1. Chien L. Y. (2019). Evidence-Based Practice and Nursing Research. *The journal of nursing research : JNR*, *27*(4), e29. https://doi.org/10.1097/jnr.0000000000000346
2. Turner, M. (2014). "Evidence-Based Practice in Health.” Retrieved from University of Canberra website:  https://canberra.libguides.com/evidence
3. Guyatt, G.H., Haynes, R.B., Jaeschke, R.Z., & Cook, D.J. (2000). Users' guides to the medical literature: XXV. evidence-based medicine: principles for applying the users' guides to patient care. JAMA, 284, 1290-1296. doi: http://dx.doi.org/10.1001/jama.284.10.1290
4. Sackett, D., Rosenberg, W., Gray, J., et al. (1996). Evidence based medicine: what it is and what it isn't: it's about integrating individual clinical expertise and the best external evidence. *BMJ*, 312, 71-72. doi: http://dx.doi.org/10.1136/bmj.312.7023.71
5. Mayer, D. (2010). Essential evidence-based medicine (2nd ed.). Cambridge: Cambridge University Press.
6. Hoffman, T., Bennett, S., & Del Mar, C. (2013). Evidence-based practice: across the health professions (2nd ed.). Chatswood, NSW: Elsevier.
7. Straus, S., Glasziou, P., Richardson, W., & Haynes, R. (2011). Evidence-based medicine: how to practice and teach it (4th ed.). Edinburgh: Churchill Livingstone Elsevier
8. Bushell, M. (2019). Supporting your practice: Evidence-based medicine. Australian Pharmacist, 38, 3, 46-55.
9. Cleary-Holdforth J and Leufer T. Evidence-based practice: sowing the seeds for success. Guest Editorial (Invited). Nurse Educ Pract; 2009. 9, p285-287
10. An Bord Altranais. Code of Professional Conduct for each Nurse and Midwife. Dublin: An Bord Altranais; 2000
11. Larrabee, J. H. (2009). *Nurse to nurse: Evidence-based practice*. New York: McGraw-Hill.
12. Fawcett, J., & Garity, J. (2009). *Evaluating research for evidence-based nursing practice*. Philadelphia: F.A. Davis.
13. Straus, S. E., Glasziou, P., Richardson, W. S., & Haynes, R. B. (2018). *Evidence-based medicine: How to practice and teach EBM*. Retrieved from <https://ebookcentral.proquest.com/>