

## Determinants of Adoption of Evidence-Based Practice Among Nurses for Clinical Decision-Making within Primary Health Care Facilities: A Narrative Review

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### Abstract

**Aim:** The study aimed to explore existing literatures in order to identify the determinants influencing the implementation of evidence-based practice in clinical decision-making among nurses.

**Methods:** A narrative literature review was conducted, articles from Google Scholar, Mendeley and PubMed were searched from 2016 upward. The reference lists of the included articles were also searched for more relevant studies. A descriptive theoretical and empirical literature analysis was done to explain the determinants of adoption of evidence-based practice in clinical decision-making among nurses.

**Results:** Findings suggested that evidence-based practice is still at its early stage in Africa when compared to developing nations. In addition, factors that determine the adoption of EBP, especially in developing countries include limited time, the high burden of diseases with respect to limited resources, limited support from leaders in the profession, organization and government; adoption strategies which include the provision of practice guidelines to nurses, sponsorship for EBP-related training, identifying mentorship role in the adoption of evidence-based practice has been revealed as effective strategies in adopting EBP in clinical decision making among nurses. In addition, limited or lack of training on the aspect of health institutions and inadequate knowledge has been acknowledged as the common barrier to the utilization of EBP in clinical decision-making among nurses.

**Conclusion:** Conclusively, it was identified that there is a wide gap between knowledge and implementation of EBP in clinical decision making among nurses, it is therefore pertinent that relevant factors and strategies influencing adoption of EBP in clinical decision-making nurses be made available or introduced.

**Keywords:** Determinants, adoption, evidence-based practice, clinical decision-making, nurses.

## Introduction

Over 50% of healthcare workers worldwide are nurses and midwives, delivering up to 90% of basic healthcare services in rural settings in low-income nations. As a result, nurses and midwives are in a good position to significantly improve patient outcomes and help the world achieve the Sustainable Development Goals (SDGs), particularly ensuring that everyone lives a healthy life and promoting well-being for all ages (Nzengya et al., 2023).

The International Council of Nurses (ICN) and World Health Organization (WHO) encourage nurses and midwives to generate and apply evidence for best nursing and midwifery practice in order to provide high-quality healthcare, especially in areas with limited resources (Nzengya et al., 2023). A technique for solving problems utilized in the clinical setting is called evidence-based practice (EBP), it applies prevailing evidence from illustrative studies, which includes the clinician's prowess and patients' regard and choice (Murphy, 2020). According to literature, evidence-based nursing entails using knowledge obtained via scientific research in clinical settings (Wubante & Tegegne, 2022). When deciding how to care for a patient clinically, evidence-based practice (EBP) relies on scientific data and integrates individual professional expertise and patient values (De Leo et al., 2019). The best available evidence is used to inform policy and the practice of those responsible for providing healthcare services, and nurses are expected to provide care using EBP, which is recognized as the primary method to improve healthcare outcomes for clients (De Leo et al., 2019). In addition, clinical decision-making is an ongoing process where data is gathered and evaluated for the proper application of up-to-date evidence for decisions (Kosicka et al., 2019; Nibbelink & Brewer, 2018).

In many cases, nurses and midwives are left out of the interpretation, publication, and distribution of study findings, which makes it harder to turn research into evidence-based practice, particularly in low-income nations, and context also affects nurses' and midwives' involvement in research. In addition, these countries have been disproportionately affected by the nursing shortage, which has been a major global concern. As a result, leads to heavy workloads and little time for research involvement. (Lieschke et al., 2022). To ensure successful research translation into practice, nurses and midwives must invest in research in clinical settings, including cutting-edge research that pertains to their field of practice. Meanwhile, over the past two decades, research has seen a shift in emphasis from nursing research being undertaken largely for academic purposes to research integration into practice (Lieschke et al., 2022; Dagne & Beshah, 2021).

As noted in previous studies, the absence of concepts with clear definitions and assessment methods, limited research competency among nurses and midwives, and a lack of contextual awareness are among the obstacles to investigating the involvement of nurses and midwives in research (Dagne & Beshah, 2021; Chen et al., 2019). Management support, access to research, time, and a supportive attitude toward research

are some of the strategies that have already been found to encourage nurses and midwives to participate in research (Lieschke et al., 2022). The study aimed to explore existing literatures in order to identify the determinants influencing the implementation of evidence-based practice in clinical decision-making among nurses. To achieve this aim, studies describing the knowledge of evidence-based practice in clinical decision-making among nurses, and the level of implementation of evidence-based practice in clinical decision-making among nurses were reviewed.

## Method

A narrative literature review was conducted using Google Scholar, Mendeley and PubMed from 2016 to 2023. The search terms included: 'determinants of implementation/adoption of EBP among nurses', 'factors influencing implementation/adoption of EBP in clinical decision-making among nurses', 'knowledge of EBP in clinical decision-making among nurses', 'level of implementation/adoption of EBP in clinical decision-making among nurses', 'barriers to implementation/adoption of EBP clinical decision-making among nurses', 'strategies influencing implementation/adoption of EBP clinical decision-making among nurses and 'clinical decision-making among nurses'. Only articles (original articles and reviews) that were related to the search terms were included, while studies outside these inclusion criteria were excluded. Reference lists of the included articles were also searched, for additional and relevant studies. A descriptive analysis of the included studies was performed to understand and highlight the determinants influencing the adoption of evidence-based practice in clinical decision-making among nurses.

## Results

### Concept of Evidence-based Nursing and Clinical Decision-making

According to (Verloo et al., 2017), evidence-based practice (EBP) can be traced back to the discipline of evidence-based medicine, where it was first described as "the careful and prudent use of current best evidence in making decisions about the care of individual patients".

Since Florence Nightingale's time in the 19<sup>th</sup> century, Research has always been a passion for nurses. By deploying trained nurses and improving hygienic conditions, It was discovered that Nightingale's ground-breaking study during the Crimean War decreased the mortality rates for ill and injured soldiers. Published in 1860, her book notes on nursing, detailed the results of her scientific investigation (Murphy, 2020).

Although the boon of EBP has been well documented in the literary texts, the process of carrying it out in its implementation in the facility is still at the conception stage (Pereira et al., 2018). Several elements related to specific persons, specialist including organizational characteristics, have been identified as obstacles to adopting EBP in various clinical settings: inaccessible online databases and high cost of published articles, limited insight on how to navigate databases and carefully evaluate research results, limited time for analysis of

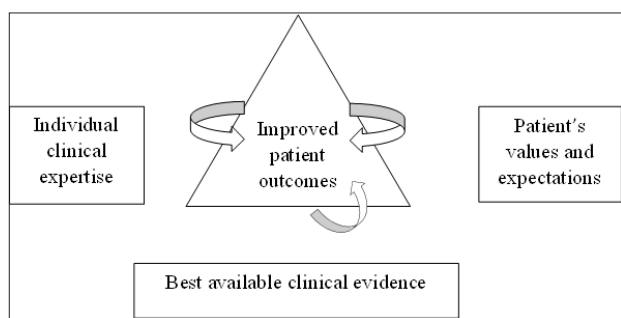
document, challenges and lack of enlightenment in conveying scientific results into practice and deficiency in nurses and support from management in transforming practices (Pereira et al., 2018).

According to (Odabaşoğlu et al., 2021). evidence-based nursing is defined to include the utilization of facts attained from scientific enquiry in professional practice. This depicts informed decision-making, which may vary in relation to the characteristics, values, health status, and preferences of the client (Stavor et al., 2017). With insight into clinical decision-making practice, the likelihood of selecting alternatives or options from a sequence of judgments, problem-solving abilities, and best plan capability could be gained by comprehending the notion of decision-making practice in the health care setting, construction of scientific assumptions and choosing nursing interventions (Gizaw et al., 2018). Around the world, 19 million nurses will employ clinical judgment when making decisions for their patients, and these patients rely on nurses to make choices that will benefit them more than hurt them. Clinical educators are now having trouble figuring out the finest way to assist nurses in enhancing their capacity for clinical decision-making (Gizaw et al., 2018). In 2015, the American National Academy of Medicine (NAM) strived to back up well above 80% of all medical decisions by the year 2020 with error-free, prompt and latest scientific enquiry giving thought to correct evidence obtainable (Stavor et al., 2017). However, it was stated in the findings of their study carried out between the period, i.e. 2015 and 2020, the incidence rate of evidence-based nursing practice was significantly less than 90% of the population (Ding et al., 2017).

### Components of Evidence-based Practice

Evidence-based practice is founded on data that comes from three important sources:

The strongest external evidence is based on research that has been published, clinical expertise, and the values and preferences of the patient. The value of each component is constrained until it is merged with the nearby components.



**Figure 1** : Key components of EBP, adopted from Mohanasundari and Padmaja (2018)

### Best Available External Evidence

The discovery, assessment, and application of the best available external clinical evidence constitute the first phase of EBP. The best evidence can come from various sources, including information from case reports, data from other scientific

disciplines, such as descriptive and qualitative research, and evidence from randomized controlled trials (Lobiondo-Wood et al., 2018; Kerr & Rainey, 2021).

### Clinical Expertise

Clinical expertise, which is the proficiency and judgment that clinicians gain through clinical experience, is the second factor. It consists of both knowledge and skill sets. Individual clinical experience can supplement, not replace, external evidence since the competence determines if the external evidence can be used for the specific patient (Kerr & Rainey, 2021).

### Patient Values and Preferences

The patient's values and preferences are a key consideration in choosing the best course of treatment because even the best available outside evidence may not be applicable to a particular patient. This brings us to the final element of EBP. The person-centered approach to treatment, in which patients actively participate in their care, aligns with incorporating patients' values and viewpoints (Kerr & Rainey, 2021).

### Nurses' Knowledge of Evidence-based Practice

(Murphy, 2020). outlined the seven levels of evidence in which the strength of the evidence is shown below, from the strongest to the weakest. Level I evidence is the strongest and most conclusive evidence from studies that provide the most dependable information (used for EBP). As you move down the list to Level VII proof, the research studies' strength becomes less strong. The following list includes the definitions for each level of evidence.

**Level I:** A systematic review, also known as a meta-analysis, compiles data from all pertinent randomized controlled trials.

**Level II:** An experiment in which participants are randomly assigned to a treatment or control group is known as a randomized controlled trial.

**Level III:** Non-randomized controlled trial; an experiment in which subjects are non-randomly assigned to a treatment group or control group.

**Level IV:** Case-control or cohort study

Case-control study: a comparison of participants with the condition and those without it in order to find traits that could indicate the disease condition.

Cohort study: a careful study of groups of people that have been categorized in order to determine the change in the outcome, which maybe a disease.

**Level V:** A synthesis of data from qualitative or descriptive research to address a clinical topic is known as a systematic review of qualitative or descriptive studies.

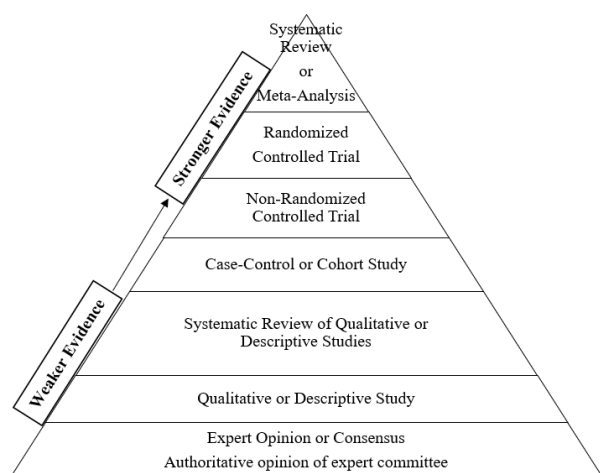
**Level VI:** Qualitative or Descriptive Study

Qualitative study: collects information about behavior in order to better understand the factors that influence decisions.

Descriptive study: gives background information on what and where of the subject of interest.

**Level VII:** authoritative advice from an expert committee, the consensus view of experts (Murphy, 2020).

The first step in understanding how EBP is created is to have a thorough awareness of the various forms of research. Level VII evidence, for instance, cannot be used to direct practice changes, but it can provide fresh perspectives on a subject to encourage additional investigation and critical thought. As was already mentioned, integrating research findings into professional nursing practice is a requirement. Looking at databases for Level I or II studies, which are believed to be the strongest, while reviewing practice-related literature will give nurses information that is valuable and can be helpful when considering a practice change (Murphy, 2020).



**Figure 2:** Levels of Evidence; Murphy, (2020)

### Level of Adoption of Evidence-Based Practice

Evidence-based practice can be implemented at different levels; this has been revealed by various studies to include how often EBP is implemented in patient care; integration of scientific research with expertise, patient preferences and values; making use of EBP to evaluate outcomes of a practice change; collection of data on patients' medical problem in order to provide evidence-based solutions to them; change practice based on patient's outcome data by implementing up-to-date EBP findings to clinical decision-making; sharing new ideas and evidence-based findings with professional colleagues; discussing evidence from a research study informally with a colleague; Using an EBP guide/step-by-step review to modify clinical practice; promoting the use of EBP to colleagues.

The degree of evidence-based practice implementation was found to be approximately 15.0 points out of 72 in a recent study by Yoo et al. (2019); he posited, the adoption of an EBP guideline or systematic review to alter clinical practice where they work and the dissemination of evidence from studies to more than two colleagues were also discovered to have low levels of participation by the participants. Another study on the beliefs and application of evidence-based practice among nurses and other healthcare professionals in the Valais hospital, Switzerland by Verloo et al. (2017). It was found that there was a low level of EBP application, with scores on the EBP-I scale ranging from 0 to 68 with a mean of 13.06 (SD = 12.7).

However, a study by Bankole et al. (2022) on the knowledge, attitude, and use of evidence-based practice among nurses in tertiary hospitals in Nigeria found that nurses used EBP well (78.7%), the highest EBP forms were reviewing the application of an intervention on patient care and finding areas for improvement (84.3%) and implementing an intervention on patient care based on the most relevant evidence (83.0%).

Results of many studies on EBP showed that when healthcare is not based on the most recent, best evidence, it might be useless, hazardous, and/or inefficient. Implementing evidence-based practice (EBP) into all curriculum for health professionals is crucial to ensuring the quality of healthcare since it teaches aspiring medical professionals the principles of research and how to use evidence in clinical practice (Larsen et al., 2019).

Furthermore, Sicily Statement, outlines the minimal educational prerequisites and skill set needed to practice in an evidence-based way, as well as a precise definition of EBP. It involves posing a clinical question, gathering the best available data, reviewing it critically, combining it with one's clinical skills, patient preferences, and values to come up with a practice decision, and assessing the result or change. This separates the method from the result of EBP and makes the fundamental procedures transparent (Larsen et al., 2019).

Implementing evidence-based practices (EBPs) is frequently hampered by a gap between EBPs and their implementation frameworks, which contain the set(s) of traits and circumstances that are rooted in elements that are distinct and sustainable (Haines et al., 2021). When an EBP, such as therapies, policies, or evaluations, is used when it is not appropriate; it might lose some of its effectiveness and burden its users—including patients, healthcare organizations, and providers—with complex adoption procedures. However, the minor distinction of various, different, complicated, and shifting practice settings is rarely addressed by EBPs (Haines et al., 2021). EBP designers may create increasingly sophisticated EBPs to account for minute aspects, which could lead to EBPs that are excessively expensive, unworkable, or even impossible to develop within realistic limitations (Haines et al., 2021).

Although it is commonly known that no deployment is complete without some degree of adaptation, methods to facilitate systematic EBP adaptation are still in their infancy (Kirk et al., 2020). Different EBP characteristics that affect adoption have been identified by implementation scientists; this evidence may inform efforts to change EBPs to boost adoption. However, there are differences across EBPs and contexts in the link between EBP attributes and implementation outcomes, even the same EBP may exhibit varying levels of success in achieving the targeted patient outcomes (Haines et al., 2021). All of these showed that the dynamic and multidimensional circumstances in which EBPs are applied directly impact how well they are adopted. There has not been much discussion on how to consider the dynamic interaction between EBP and context (Nilsen et al., 2017). Implementation scientists frequently utilize adoption strategies, also known as "methods



or procedures used to promote the adoption and sustainability” of EBPs, to overcome inconsistencies between EBPs and contexts. A “more is better” deployment strategy for adoption solutions, however, may put strain on EBP users if it tries to make up for a poor fit between the EBP and the context.

Comprehensively, scientists interested in adoption have called for ways in which adoption strategies can be well fitted to EBP and its contexts (Powell et al., 2017). Instead of employing burdensome EBP or the adoption strategies to promote fit in EBP and its contexts, scientists with interest in this area should seek to harmonize EBP and the frameworks. Similarly, to reduce user burden and maximize implementation, creating EBPs and adoption plans that align with the main aspects of context is necessary (Powell et al., 2017).

### **Determinants and Strategies Influencing Adoption of Evidence-Based Practice in Clinical Decision-Making**

Determinants of EBP are factors that directly or indirectly affect EBP implementation while strategies are methods or techniques used to enhance EBP implementation. With respect to this definition, several studies have been carried out to assess and identify determinants or factor that improves the implementation of EBP among nurses, either at the tertiary, secondary or primary level of care. A study conducted on determinants of an evidence-based practice environment: an interpretive description by (Duff et al., 2020) identified four broad determinants of implementation of EBP. They include; ‘process’, which includes knowledge of EBP and relevant theories, alignment of a specific EBP to organizational goals, implementation guidance, and individual or organization focus on frontline practice. Another category is ‘support’, this includes training on EBP, seeing EBP as a must for all nurses, EBP education, academic partnership and knowledge infrastructure. The third category that was identified is ‘facilitation’, this includes direct supervision by nurse leaders on EBP activities, actively engaged nurse management, mentors or direct care nursing staff that can provide immediate guidance on EBP and expert support from nurse scientists. Furthermore, the last category is context; it includes continuous improvement in practice, external recognition, shared governance and leadership support.

Previous study examining nurses’ beliefs, skills and understanding of EBP revealed that nurses experience various difficulties when implementing EBP, which can result in a lack of engagement and become a barrier if not promptly addressed. Lack of time, a lack of personnel, a heavy patient load, duties to one’s family, a lack of experience with EBP, and negative attitudes against it, and poor academic abilities are among the difficulties that are regularly noted (Mathieson et al., 2019). However, the application of the best available research in practice is hindered by the fact that many papers do not discuss why and how implementation processes have succeeded or why attempts have failed. In addition, there have been calls for policymakers and researchers to study these processes using theory (Mathieson et al., 2019). If these determinants to EBP adoption can be adequately addressed, this will further form a

bedrock for measures or procedures to improve the long-term adoption of EBP by nurses. Furthermore, the determinants of EBP adoption include the facilitators and barriers in which if not addressed, will lead to the delivery of low-quality healthcare to patients.

Education is one of the key tactics that has been proven to be successful in making the transition to evidence-based practice (EBP) in terms of the actions that should be taken to implement it in clinical decision-making. The educational institutions that train future nursing practitioners are quite important in this regard. It is also advised that EBP instruction be incorporated into nursing curricula in a form that can be assessed throughout the training process. This should be done to ensure that students can develop the skills and abilities needed at various levels. While there is no doubt that education is a key strategy, administration support and organizational commitment are also necessary. It is imperative to keep in mind that companies will employ nursing professionals at different points in their career development, necessitating strategic planning to allow for the integration of everyone at all levels (Moreno, 2019).

Similarly, (Fisher et al., 2016) noted that in order to allow healthcare workers to gradually develop their skills, companies must have a methodologically prepared plan. In order to enable sustained operation in this sector, this must be supplemented with an EBP mentorship program including staff members. The first step in accomplishing this is to assess the knowledge and beliefs of the current nursing professionals and to establish how prepared the organization is to implement EBP. Based on this knowledge, it is vital to identify the various stages that staff members must pass to advance, while also adhering to Benner’s classification of skill acquisition levels into five levels (Moreno, 2019). On the level of organizational preparation, it is necessary to have the backing of the administration and the organization’s commitment, as these factors are crucial for allowing the time and resources needed to establish a long-term, methodical program with a methodology that accommodates change. Leaders must participate to strengthen a value that encourages the adoption of EBP and be persuaded that doing so would result in improved care quality and safety (Moreno, 2019).

The ultimate objective of EBP is to create a culture at healthcare facilities that permits the introduction of new practices or the modification of current ones in a way that sustainably improves population health. Therefore, the shift to EBP is a challenge and requires a commitment on the part of all healthcare professionals, researchers, the educational community and the business as a whole. Individual efforts alone won’t solve the problem. A key tactic to enhance the transfer of information to practice is to form an alliance between academics, researchers and clinical nurses (Fitzpatrick et al., 2019).

### **Facilitators to Adoption of EBP**

In a study on the strategies, facilitators, and challenges to the adoption of evidence-based practice in community nursing, the following themes linked to EBP adoption facilitators examined;

(Mathieson et al., 2019) found that practical concerns like reducing clinical time, cost-effectiveness, and convenience of use were crucial factors for community nurses to take into account while implementing EBP. Other elements, including pre-existing trusting nurse-patient relationships, its value to professional advancement, and how it advances organizational objectives, have also been noted as EBP adoption facilitators.

Evidence-based practice implementation according to (Murphy, 2020) includes Nursing representation on hospital-wide committees that promote EBP, giving nurses time during the workday to read and plan practice change activities, management integrating the definition of EBP in all communications, incorporating EBP into new hire orientation, and more. creating an EBP council or committee, having members take on leadership roles, generating a newsletter for the organization to convey research activities and the importance of EBP, providing training materials for EBP, to encourage staff interest in and ownership of research, the establishment of EBP advocates within the company, a culture of respect among all disciplines, taking part in an annual research symposium, rewarding personnel for critical thinking, providing hands-on training sessions on how to obtain and evaluate research, the development of a manual for nurses for a subcommittee to promote the use of EBP among nurses, scheduling time for learning and understanding research in monthly meetings, quarterly research workshops, and yearly grand rounds, converting research findings into an easily understandable format, exchanging research knowledge via email and online forums, and using a bulletin board to display current EBP are all examples of ways to do this.

### Challenges to Adoption of EBP

Several researchers have classified the obstacles to EBP adoption into various subcategories; they were divided into practitioner-level hurdles and organizational-level barriers (Lizarondo et al., 2019). Some of the first barriers were inadequate legislation, transdisciplinary issues, a lack of incentives for research and educational progress, inadequate leadership roles, a lack of information resources, and insufficient human and material resources (Abdulwadud et al., 2019; Lizarondo et al., 2019). Lack of knowledge and expertise in research and statistics, which are necessary for the practice of EBP, is one of the practitioner-level hurdles (Abdulwadud et al., 2019; Lizarondo et al., 2019; Shayan et al., 2019). Research conducted by (Atakro et al., 2020) at a Ghanaian teaching hospital on registered nurses' perceived barriers to evidence-based practice categorized these barriers into; Institutional barriers, training-related barriers, and nursing-related barriers. In addition, workload, lack of internet access, library resources, and institutional and workplace restrictions on the usage of EBP were just few of the issues that participants reported as preventing RNs from fully implementing EBP at the hospital.

Another study was conducted by (Lateef & Mhlongo, 2022). on patient-centered care and nurses' perceptions of PHC facilities in Nigeria, which is one of the key elements of EBP. The researcher identified some challenges being faced by nurses to

include organizational factors, such as a lack of management support, poor pay and incentives, a lack of practice guidelines and standards, lack of opportunities for additional training, work overload, and time restraint.

Furthermore, organizational, professional, and human limitations can obstruct the move from a culture-based to a scientific perspective (Muñoz, 2018; Pereira et al., 2018). A lack of acquaintance with EBP, the influence of habit, and a resistance to changing one's mentality are among the most significant personal ones. The latter relates to academic preparation for the workplace because not all nursing professionals who are active in clinical practice have received training in the EBP model. Institutional constraints apply to the organization as a whole, specifically to complex settings, leadership styles, the organization's specific interests, structures, communication, and available resources. We should consider why this transition continues to be such a huge challenge, what steps should be taken, and who should be in charge of putting them into practice after considering the main benefits and constraints that limit the application of scientific evidence in clinical settings, which are becoming more and more accessible to healthcare professionals (Moreno, 2019).

### Conceptual Framework

The Theory of Innovation Diffusion (TID) adequately explain the variables in the study. It is one of the earliest social science ideas ever employed and was created by E.M. Rogers in 1962. It first appeared in communication to explain how an idea or product gradually develops momentum and spreads within a certain community (LaMorte, 2022).

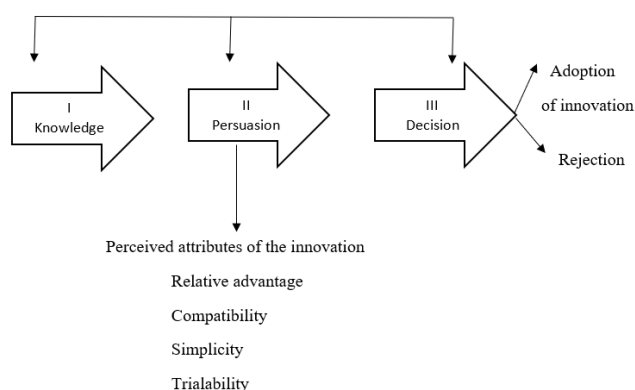
Diffusion is a common philosophy that happens to individuals while acquiring an understanding process in relation to innovation which may be, for example; a new EBP approach for promoting healthiness. Based on its classical design, it encompasses an innovation that is linked through a specific process over a long period between individuals in a social structure (Dearing & Cox, 2018). A distinct factor in diffusion findings is a moment of adoption, and this will yield a substantial result if relevant organisations are involved. It is important to distinguish situations that promote its adoption and interrelated means of adoption. The theory helps to evaluate how some clinical behaviours are implanted, and it enables emphasis on specific characteristics of innovation (EBP) that increase adoption uptake.

Rogers proposed innovation qualities to include sustainable factors that are intended for adoption; he further itemised features for adoption which include relative advantage, compatibility, simplicity, observability, and trialability, in the end, determines the adoption and diffusion of innovation in an actual medical community. Furthermore, the theory also provides all the essential guidelines needed to influence the adoption of a new concept and personal opinion of an innovation's attribute perhaps will envisage adoption.

(McWilliams & Mehrotra, 2018) posited that Rogers's diffusion

of innovation model addressed the following variables;

*Knowledge* is formed when there is an exposure of an individual to an existing innovation, and the individual obtains an understanding of an actual innovation and obtains a degree of understanding of the concept and how it operates. Getting to the *persuasion* stage, the individual must have had an opinion on innovation and its related characteristics; this includes relative advantage, complexity, compatibility, simplicity and trialability. The *Decision* implies that the individual is already engaged in some activities that will make the individual reach a conclusion or whether to adopt the innovation or not. In order for *Adoption* (implementation) to occur, the individual must reach a conclusion that the solution for advancement is innovation. The illustration of the variables discussed above can be found in Figure 3 below;



**Figure 3:** The process of adoption in Rogers's diffusion of innovation model. Adopted from Dearing and Cox (2018)

### Application of the Model

Due to the call for EBP transition, which is expected to be implemented by nurses in everyday clinical decision-making, identifying the determinants/factors that influence its adoption is essential; this will further help to put on appropriate measures or modify existing ones in order to aid the positive implementation of EBP.

The first variable in the model is 'knowledge', and this addresses the foremost objective of the review. The first stage in putting evidence-based practice into practice is having knowledge of it and knowing how to use it; knowledge is gained through conventional research methods and scientific investigation. By conducting a single study, also known as a primary research study, research findings are generated. Options for research design include qualitative, randomized control trials, causal, descriptive, correlational, and those involving causality. The foundation for clinical action research is laid during this phase. In addition, inadequate EBP knowledge has been identified as a major obstacle to EBP adoption in nursing clinical decision-making.

The second variable of the theory is 'persuasion'; this addressed the second and third objectives of this study. This comprises of nurses' perceived benefits of implementation of EBP in clinical decision-making, adaptability to health institution

culture and environment, ease of implementation, degree of support from government and health institutions, provision of training/workshops on EBP, support from nurse leaders, direct mentorship in relation to EBP, workload burden and absence or presence of other barriers to EBP implementation. All these factors can be categorized into determinants and strategies for the implementation of EBP, and they all play a role in persuading nurses on whether to implement EBP in clinical decision-making or not; the degree of presence of these factors will as well influence the level of implementation of EBP in clinical decision-making.

The third variable in the model is 'decision', this addressed the outcome of the interplay between determinants and strategies of implementing EBP; which will either lead to its implementation or rejection in clinical decision-making among nurses. The degree to which EBP is implemented in clinical decision-making will also depend on how well it is evaluated for its impacts on health outcomes, provider and patient satisfaction, effectiveness, efficiency, economic analysis, and impact on health.

### Conclusion

Nurses being the largest workforce in the healthcare system, they are extensively involved in the provision of healthcare services to individuals and the community at large. Therefore, the significance of adoption of EBP in clinical decision-making cannot be over emphasized, as it is based on patients' preferences and values in order to improve their health outcomes. In addition, it is the work of nurses at various levels of healthcare and education to actively engage in translation of EBP in clinical decision-making in order to provide quality and up-to-date health care services to our patient.

### Author Contributions

Conception and writing of the study: O. O. O.

Study supervision: F. A. O.

Critical analysis and revisions for important intellectual content: O. O. O., Y. O. T., E. O. A., O.A and O. M. A.

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The authors declare that they have no competing interests

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