

# Framework for Embedding Evidence-Based Practice Approach in Primary Healthcare Centres

Amel I. Ahmed\*, Rasha A. Mohamed

Community Health Nursing Department, Faculty of Nursing, Mansoura University, Egypt

\*Corresponding author: Amel. I Ahmed

E. mail: [amahmed.aa313@gmail.com](mailto:amahmed.aa313@gmail.com)

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**Abstract:** Background: Evidence-based practice (EBP) has gained prominence across healthcare system. Primary healthcare is an important pillar for the universal coverage. Implementing EBP is theorized to benefit primary healthcare systems, healthcare consumers and healthcare professionals including nurses. Using of a framework might be beneficial to inform the processes for embedding the culture of EBP. Aim: The study aimed at designing a framework that support embedding of EBP approach at primary healthcare centers. Research Design: Qualitative “action research” study design was utilized throughout this study. Setting: This study was carried out at the primary healthcare centers- Mansoura district, Dakahlia Governorate, Egypt during the period from September 2018 until May 2019. Subjects and Sampling: Convenience purposive sampling technique was used to recruit the study participants who were composed of 55 participants (29 healthcare professionals, 14 policymakers and 12 EBP experts). Data Collection: A structured self-administered questionnaire and semi-structured interview was used to collect data and different open-ended questions were used to achieve the aim of this study. Results: Many of the primary healthcare professionals viewed EBP as a beneficial approach. They stated that the educational intervention is the essential for applying new approaches. The majority of policymakers (n= 10) indicated that to active the goal of implementing EBP thy need supportive leadership and financial supply to fulfill the infrastructure requirements. Moreover, they mentioned that providing training is an essential requirement to capacity building for applying EBP approach. They stated that collaboration with the academic institutions is mandatory for effective training on EBP. As well, the EBP experts' views revealed that acquiring urgency needs for EBP, building a team, provision of the resources, pilot application, stating policies and regulations are the supportive strategies for applying EBP. Conclusion and Recommendations: The primary healthcare professionals and policy makers showed a positive beliefs about the important and benefits of EBP approach. They found EBP mandatory competency for each healthcare professional at any discipline and is a backbone for professional development. This designed framework for embedding EBP in primary healthcare centers and gave a valuable tool on the planning for application of EBP approach combined with evaluation elements. The study recommended dissemination of the designed framework to authorized health agency and testing its feasibility at one primary healthcare center.

**Keywords:** Evidence-Based Practice, Framework, Nursing, Primary Healthcare.

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## I. INTRODUCTION

Evidence-based practice (EBP) became an aspiration for healthcare systems all over the world. Utilization of EBP at the clinical practice is a crucial issue that achieves equitable access to healthcare and improves the outcomes of population health [1,2 ,3]. Embedding of EBP assists the community and primary healthcare professionals to recognize the roots of health problems and help them in making informed decision based on valid evidence for implementing different

community programs [4]. The application of EBP ensures the consistency of practice that results in better outcomes as well as ameliorated satisfaction among health services' consumers and healthcare professionals as well [5].

The WHO revealed that transforming driven knowledge from researches into practice is crucial for achieving universal health coverage based on the "Health for All" movement and the Alma Ata Declaration on Primary Health Care [6]. The WHO in 2013 declared that using evidence-based practice is a cornerstone in developing policy and technical guidance education of healthcare workforce including community health nursing. Moreover, WHO emphasized on using evidence-based practice in different health promotion actions especially in health education strategies [7].

Healthcare professionals including community health nurses are expected to integrate EBP in delivering healthcare services [8]. Primary healthcare services and universal health coverage that encompass preventive, curative and rehabilitative services are depending on the contributions of community health professionals. However, these contributions would be enhanced by stating regulations that support participation in decision-making and professional autonomy [9,10]. Furthermore, the community health services would be enhanced by implementing EBP for ensuring the equity and quality of the provided services [11].

Although, there are significant advantages of implementing EBP, insufficient knowledge, and skills related to EBP among healthcare professionals as well as lack of time and lack of authorization to implement innovation in clinical practice may hinder the application of EBP at community healthcare settings specifically [12,13,14, 15]. In addition healthcare organizations experience resistance in culture change, lack of supportive policies and resources limitation especially in computer facilities would delay the implementation of EBP [15,16,17].

In Egypt, the implementation of EBP became a mandatory option for improving the quality of primary, secondary and tertiary healthcare services. The General Authority for Healthcare Accreditation & Regulation (GAHAR) issued that evidence-based clinical guideline should govern the management of all health condition [18]. However, the embedding of EBP in the healthcare community requires supportive strategies that facilitated the implementation of EBP. These strategies emphasize building capacity through training on EBP and strengthening of leadership roles such as mentorship, stating policies and regulations in addition to building infrastructure and allocation of resources [19,20,21].

Community healthcare settings require a tool that gives a direction for implementing EBP as a novel approach such as EBP that requires a culture change. Using of a framework might be useful and beneficial to inform the processes for embedding the culture of using research into healthcare practice [22]. Moreover, Misso, M. L et. al., 2016 reported that a framework is required to facilitate the integration and sustainability of EBP in the healthcare system [23]. Therefore, the current study was conducted to provide a framework for embedding the EBP approach in primary healthcare centers.

### **Aim of the study**

The study aimed at designing a framework that support embedding of EBP approach at primary healthcare centers.

The study explored the following research questions:

1. What are the views of the healthcare professionals about evidence-based practice and its application possibilities at primary healthcare centers?
2. What are the views of the policymakers and key persons about evidence-based practice and its application possibilities at primary healthcare centers?
3. What are the views of the experts about evidence-based practice and its application possibilities at primary healthcare centers?

## **II. METHOD**

### **2.1. Study Design**

Qualitative "action research" study design was utilized throughout this study. While the development of framework requires an in-depth investigation of primary healthcare professionals and policymakers, and EBP experts' views about strategies of implementation of evidence-based practice approach.

## 2.2. Setting

This study was carried out at the primary healthcare centers at Mansoura district, Dakahlia Governorate, Egypt during the period from September 2018 until May 2019.

## 2.3. Subjects and Sampling Technique

The total number of the study participants was 55 participants; (29 healthcare professionals, 14 policymakers and 12 EBP experts). This number of the study participants was adequate for a qualitative research design that aimed at in-depth investigation of the participants' views to produce contextual understandings that is based on detailed data, and emphasized on the holistic form of analysis. According to Yin, R. K. (2011) [24], the required sampling for qualitative research design fall between 25-50 participants.

*Recruitment of study participants was accomplished as follows:*

- A convenience purposive sampling technique was used to recruit healthcare professionals from different primary healthcare centers. To involve the healthcare professionals in this study they should have previous knowledge about EBP through studying it in academic courses and/or attended a training program about EBP or research utilization. Therefore, only twenty-nine of the primary healthcare professional were eligible and agreed to participate in the study. The eligible study participants involved 6 head nurses, 12 physician, 8 pharmacist, and 3 dentists.
- A convenience sampling technique was used to recruit the policymakers and EBP experts. The policymakers include 14 key persons who were 4 managers of the primary healthcare center, 5 nursing matrons, and 5 persons of quality improvement and infection control teams' members. In addition, 12 experts in EBP were involved in this study to elicit their views and experiences toward the possible application of EBP in the primary healthcare centers.

## 2.4. Study Tools

2.4.1. A structured self-administered questionnaire was used to assess the demographic and occupational data.

2.4.2. A semi-structured interview was used to collect data in relation to views of the healthcare professionals, policymakers and experts regarding the application of EBP approach at primary healthcare centers.

### **Open-ended questions were used to explore the views of the healthcare professionals regarding the application of EBP approach at primary healthcare centers:**

1. What is your perspective toward the effect of applying evidence-based practices approach on your clinical practice?
2. How do you describe the supportive factors in clinical environments for the application of evidence-based practice approach?
3. How do you describe the obstacles that may hinder the application of evidence-based practices approach at primary healthcare centers?
4. What are the required facilities for applying evidence-based practices at primary healthcare centers?
5. What do you suggest for applying evidence-based practices approach?

### **Open-ended questions were used to explore the views of the policymakers regarding the possibilities of integrating EBP into regulations of primary healthcare centers:**

1. How do you find the application of evidence-based practices approach can help in the improvement of the provided healthcare services?
2. What is the role of decision-makers in applying evidence-based practices approach in primary health care centers?
3. What do you suggest for applying evidence-based practices approach?

### **Open-ended questions were used to elicit the experts' views about EBP and its application possibilities at primary healthcare centers:**

1. What do you suggest for the application of EBP at the primary healthcare centers?

- Probing questions were used in terms of barriers hindering the application, facilitators for overcoming these barriers, and the most possible method for applying EBP.

#### **Open-ended questions to obtain feedback of the experts' views about the designed framework:**

1. How do you describe the feasibility of the designed framework?

#### **2.5. Pilot Study**

A pilot study was conducted on 3 healthcare professionals, 2 policymakers and 2 EBP experts to test the clarity, applicability, and reliability of the study tools and to estimate the approximate time necessary for data collection. The participants of the pilot study were not included in the study sample. The modifications were done based on the pilot results relevant to change in the structure of some questions.

#### **2.6. Process of Study Implementation**

The healthcare professionals, policymakers and experts were invited to participate in the study. The interviews were conducted at the premises of Faculty of Nursing, Mansoura University. Initial data collection was carried out during 10 working days. Six to eight interviews were conducted/day, each interview consumed 20-30 minutes.

#### **2.7. Designing of the framework**

The framework for embedding evidence- based practice at primary healthcare centers was designed based on the views of healthcare professionals, policy makers and evidence- based practice experts. The first draft of the framework was designed and illustrated to the study participants.

#### **2.8. Data Analysis**

Thematic analysis was used to illustrate the collected data. The interview transcripts were analyzed to conclude the common themes, similarities, and/or variations among the participants' knowledge and/or views. Data were coded, identified under categories and subcategories, and organized together under common themes. To ensure the validity of the thematic analysis, the researchers met four times to review the findings to clarify the analysis in relation to the emerging categories and themes [25].

#### **2.9. Ethical Considerations**

An official letter from the Faculty of Nursing, Mansoura University submitted to the administrative authorities in the chosen settings for obtaining permission and support during data collection. The community health nursing departments' committee and the faculty research ethics committee approved this study. Informed verbal consents were obtained from all study participants. All study participants were informed that all the obtained information would be considered confidential and analyzed anonymously. Besides, they were informed about their right to withdraw from the study at any time with no reason.

### **III. RESULTS**

Table 1 displays the demographic and professional characteristics of the entire participants of the study. The majority of the study participants 85.5% are females, 43.6% of them are physicians, 18.2% are head nurses and pharmacist. More than one third of them have experience less than 5 years.

**Table 1: Distribution of the healthcare professionals according to their occupational characteristics**

<b>Item</b>	<b>(N=55)</b>	<b>%</b>
<b>Gender</b>		
Male	8	14.5
Female	47	85.5
<b>Level of education</b>		
Bachelor's degree	30	54.5
Postgraduate degree	25	45.4

<b>Working condition</b>		
Physician	24	43.6
Head nurse	10	18.2
Pharmacist	10	18.2
Academic staff	8	14.5
Dentist	3	5.5
<b>Years of experience</b>		
<5 years	20	36.3
5<10 years	15	27.3
10<15 years	20	36.4

The results of this study are illustrated in two main parts:-

**Part 1** displays the views of the study participants toward evidence-based practice (EBP) approach and/or supportive strategies of its application. This part includes three main themes as illustrated in diagram 1:

**Part 2** displays the designed framework for embedding EBP in primary healthcare centers. This part includes two main themes as illustrated in diagram 2.

- A. Planning phase.
- B. Application and Evaluation Phase.

**Part 1: Views of the study participants toward EBP approach and/or supportive strategies of its application**



**Diagram 1: Views of the study participants regarding EBP approach and/or supportive strategies of its application**

**A. Views of the PHCPs toward EBP:**

Box 1: Displays the views of PHCPs toward EBP. It is categorized into two themes.

<b>Box 1. Views of the primary healthcare professionals toward EBP</b>
<p><b>Benefits and requirements for EBP application</b></p> <ul style="list-style-type: none"> <li>▪ Training programs on EBP</li> <li>▪ Hiring personnel who are competent in EBP</li> <li>▪ Availability of resources (Manpower and physical resources)</li> <li>▪ Leadership and regulations support</li> </ul>

**Method of applying EBP**

- Educational intervention
- Adopting clinical practice guidelines for applying EBP
- Adopting clinical protocol for applying EBP

**1. Benefits and requirements for EBP application:**

Many of the PHCPs (n=14) viewed EBP as a beneficial approach: *"EBP approach is a necessary approach that benefited patients, PHCPs, and the healthcare centers"*, *"As a clinical pharmacist, EBP provides me with a recognized position in the organizations"*. On the other hand, one half of the PHCPs (n=15) reported that EBP is a complex approach that requires the building of human capacity and well-structured resources: *"Implementing EBP depends on providing a supportive organizational climate with the necessary resources"*, *"EBP requires the building of the capacity of the PHCPs"*. Many of the PHCPs (n=17) expressed their needs for training programs on EBP and hiring personnel who are competent in EBP: *"We need training programs related to EBP"*, *"The healthcare center should recruit HCPs with previous knowledge and skills of EBP"*. The majority of the PHCPs (n=25) suggested that the healthcare centers should be equipped with the necessary resources for EBP application: *"The healthcare organization should provide an internet access for HCPs"*, *"EBP requires a change in the all healthcare system"*. While, others mentioned also the importance of leadership and regulations support to transform practice from individual experiences only to EBP:

*"Leaders should support collaboration within and outside the healthcare center"*

*"The healthcare system policies should support practice change"*

**2. Method of applying EBP:**

Less than half of the PHCPs (n=12) mentioned that the educational intervention is the best common method for applying new approaches among the HCPs: *"Printed educational materials are common, easy to use, and applicable in our clinical practices"*. In addition, more than one-quarter of the PHCPs (n= 9) preferred adopting clinical practice guidelines for applying EBP and few numbers of them (n=4) mentioned the clinical protocol for applying evidence.

*"Using clinical practice guidelines such as infection control guideline is preferred to us"*

*"I prefer guideline, as it is considered the standard for clinical practices"*

*"Due to the nature of the working condition, we prefer the clinical protocol since it is easy for application in the clinical management of various diseases"*

*"A clinical protocol is an inclusive tool for applying the clinical practices"*

**B. Views of the policymakers regarding EBP:**

Views of the policymakers regarding EBP are concluded into two themes as shown in Box 2.

**Box 2. Views of the policymakers regarding EBP**

**Benefits of EBP**

- Improving the quality of care
- Upgrading the competencies of policymakers themselves
- A referenced and updated tools in formulating policies
- Increase knowledge and experience in formulating policies based on the best evidence
- Improve the outcomes and achieve a better quality

**Requirements and available resources for applying EBP**

- Provision of effective and ongoing training programs to all staff
- Collaboration with the academic institutions
- Assignment of a training team for orienting the new staff
- Availability of supportive leadership and policies
- Availability of leaders that are qualified in EBP, knowledgeable, skillful, have a clear vision and supportive for the change, and good communicators
- Provision of financial supply to fulfill the infrastructure requirements



**1. Benefits of EBP:**

All the policymakers (n=14) reported that integration of EBP in decision-making is a beneficial approach in improving the quality of care and upgrading the competencies of policymakers themselves:

*"EBP will provide us with referenced and updated tools in formulating policies", "EBP will increase knowledge and experience in formulating policies based on the best evidence". As well as, "EBP will provide us with innovative issues which will improve the outcomes and achieve better quality".*

**2. Required and available resources for applying EBP:**

Most of the policymakers (n=11) mentioned that providing training is an essential requirement to capacity building for applying EBP approach. They stated that collaboration with academic institutions is mandatory for effective training on EBP. They reported that holding training programs is included in staff development plans of the primary healthcare systems.

*"Training of the primary healthcare personnel is basic to implement EBP"*

*"We concerned with collaboration with the academic setting for holding training programs to develop staff and for presenting new issues into the clinical practices from different specialties", "There are assigned training team for orienting the new staff as well as for providing ongoing training to all staff and is followed by evaluation"*

The majority of the policymakers (n= 10) indicated their needs to the supportive leadership to achieve the goal of EBP plus financial supply to fulfill the infrastructure requirements. Additionally, they reported that the leader is one of the essential supportive measures for applying new approaches. Furthermore, all the policymakers stated that an effective application of EBP requires the leaders to be qualified in EBP and to have adequate leadership skills

*"We need supportive policies and enough budget to build the physical resources"*

*"As a nursing manager with the leadership support, we encouraged staff through the application of new techniques according to requirement"*

*"Leaders should be knowledgeable, skillful, and supportive for change", "Key leaders should have a clear vision of the change, and to be a good communicator"*

**C. Views of the experts toward the supportive strategies for applying EBP:**

All of the experts classified their suggestions for supportive strategies of applying EBP into five themes (Box 3).

<b>Box 3. Views of the experts toward the supportive strategies for applying EBP</b>
<p><b>1. Acquiring urgency needs for EBP</b></p> <ul style="list-style-type: none"> <li>▪ Have a sense of responsibility among the healthcare professionals and policymakers regarding their roles in implementing EBP</li> <li>▪ Realization of the need to change</li> <li>▪ Continuous evaluation of their clinical practices</li> </ul> <p><b>2. Building a team</b></p> <ul style="list-style-type: none"> <li>▪ Recruitment of a multidisciplinary team for EBP</li> <li>▪ Selection of EBP team members is based on their level of competency and enthusiasm for EBP application</li> </ul> <p><b>3. Provision of the resources</b></p> <ul style="list-style-type: none"> <li>▪ Assessment of the organizational resources and readiness to change</li> <li>▪ Provision of physical resources as internet access</li> <li>▪ Allocation of time for achieving EBP activities</li> </ul> <p><b>4. Pilot application of the EBP approach</b></p> <ul style="list-style-type: none"> <li>▪ Testing the applicability of EBP in a selected center before generalization to others</li> </ul> <p><b>5. Stating policies and regulations</b></p> <ul style="list-style-type: none"> <li>▪ EBP to become an integral part of the regulatory policies</li> </ul>

**1. Acquiring urgency needs for EBP:**

The experts reported that acquiring urgency needs for EBP application among the healthcare professionals and policymakers is the first step to change practice. What is more, the experts mentioned the importance of acquiring a sense of responsibility among healthcare professionals and policymakers regarding their roles in implementing EBP. They thought that a sense of responsibility will make the healthcare professionals and policymakers to do their best in embedding EBP in their healthcare centers.

*"The HCPs need the sense of urgency or require to realize the need to change", "Building a sense of responsibility among the HCPs make them more adherent with the assigned roles through continuous evaluation of their clinical practices"*

**2. Building a team:**

The experts mentioned that recruiting a multidisciplinary team for EBP would facilitate the process of EBP application. Members of the EBP team should be selected according to their level of competency in EBP and their enthusiasm for EBP application.

*"Building a multidisciplinary team including different categories of the HCPs can be the starting point for applying any innovation"*

*"Selection of the team members should be made through a committee depending on the selection of the cooperative, qualified, and motivated staff toward the change"*

**3. Provision of the resources:**

The experts stated that assessment of the organizational resources and readiness to change are crucial steps for the application of EBP. What is more, the experts mentioned the necessities of the leaders' role in providing the required resources and allocating time for achieving EBP activities

*"Assessment of the organizational resources is considered as the first step to detect the organizational requirements for applying EBP"*

*"The leader should provide the physical resources as well as provide the HCPs with enough time without any assigned activities for training and applying EBP", "Provision of internet access is necessary for the HCPs to apply the evidence"*

**4. Pilot application:**

All the experts confirmed the importance of pilot application of the EBP approach in a selected center before generalization to others.

*"It is necessary to make a pilot application of the EBP approach through selecting and implementing the evidence on one healthcare center or within one team such as infection control team before generalizing it into the whole primary healthcare system"*

**5. Stating policies and regulations:**

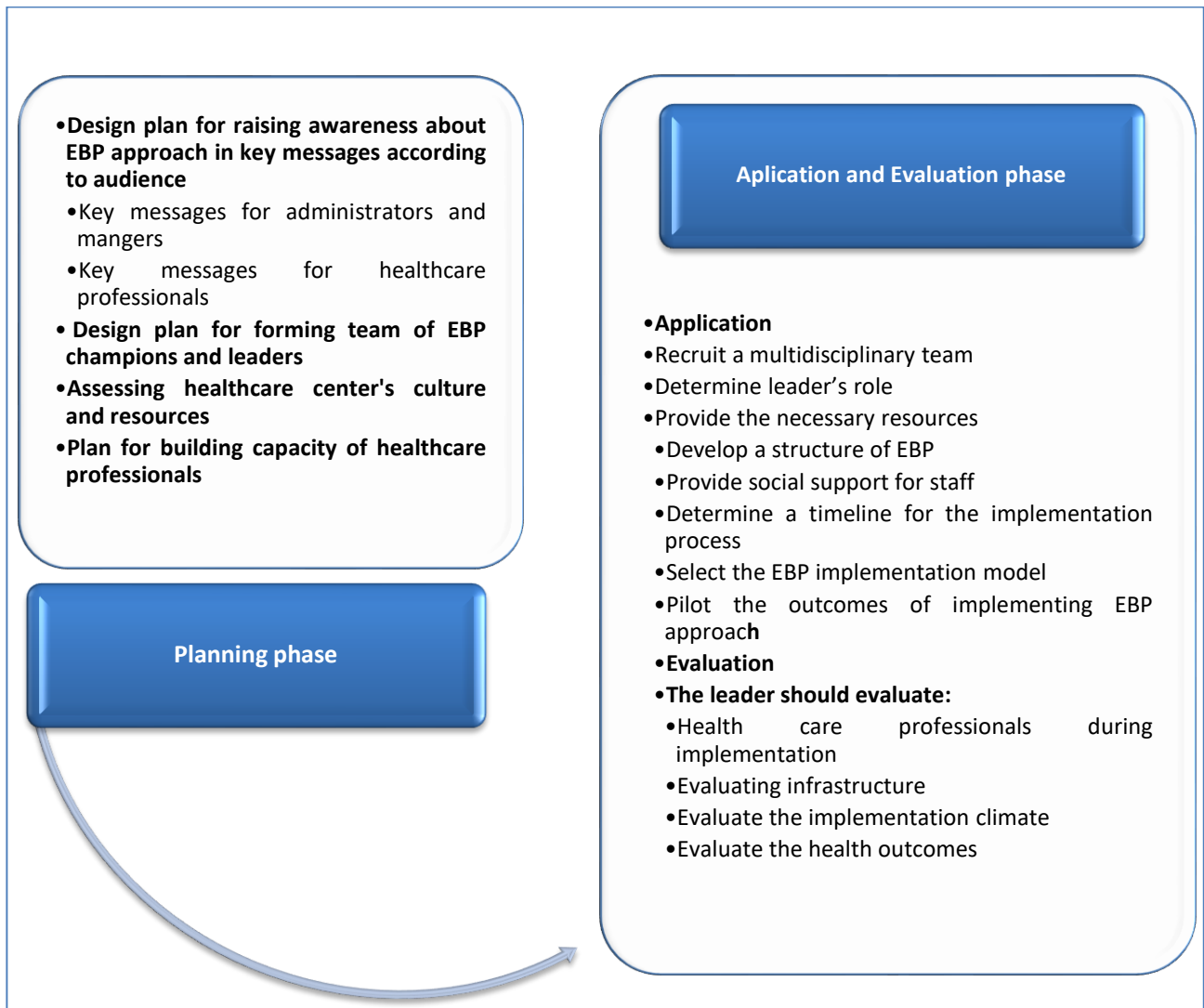
The experts mentioned that the barriers to implementation of EBP approach would be overcome if the EBP became an integral part of the regulatory policies.

*"We can overcome the barriers of EBP among the HCPs through the mandatory application of EBP", "The obligation will make the HCPs adhere and apply the EBP approach"*

**Part 2: The designed framework for embedding EBP in primary healthcare centers**

Based on the participation of the PHCPs, policymakers, and experts of EBP, the framework for embedding EBP in primary healthcare centers was designed. The framework is composed of two phases that included planning phase, and implementation phase and evaluation phase as portrayed in Diagram 2.





**Diagram 2: Framework for Embedding EBP in Primary Healthcare Centers**

**A. Planning phase:**

The elements of the planning phase of the framework are illustrated in Box 4. The planning phase includes design a raising awareness plan about EBP approach and forming a team of EBP champions and leaders. Raising awareness plan would be carried out through conducting orientation sessions with key persons and healthcare professionals of the primary healthcare centers. Key messages are to be tailored and delivered according to the main concerns of the audience. Key messages for administrators and managers should be focused on the importance of EBP reputations of the healthcare center and cost-benefit issues. On the other hand, key messages for healthcare professionals should be focused on professional empowerment, protection against litigation, increasing rewarding, and value for money. Forming of EBP team of champions and leaders is taking place in the planning phase. This team is to be recruited at different departments of a healthcare center. Assessment of the healthcare center’s culture and resources is to be conducted after forming a team of champions and leaders to facilitate the assessment process. Culture and resources assessment encompasses a channel of communication within the healthcare center, human capacity, and financial resources. Assessment of assisting factors, supportive policies of EBP parallel with obstacles should be carried out. Accordingly, a plan for building capacity for the application of EBP would be established.

**Box 4: Planning Phase of the Framework for Embedding Evidence- Based Practice at Primary Healthcare Centers****1. Raising awareness plan*****Key messages for administrators and managers***

- Enhancement of quality of service delivery
- Improvement of health outcomes and healthcare consumer safety
- Reduction in healthcare consumer complaints, adverse events, and litigation
- Enhancement of the public's confidence in the healthcare provider's competence
- Higher levels of the employee at the healthcare center and healthcare consumers' satisfaction
- Representation of cost- benefits scheme for implementing EBP
- Evidence for the allocation of resources
- Representation of return on investment and payback
- Enhancement of confidence in the workforce as decision-making is reflected in enhanced care outcomes.

***Key messages for healthcare professionals***

- Professional empowerment through enhanced knowledge
- Enhancement of personal and professional confidence in problem-solving
- Appraisal of different treatment options and interventions
- Protection against litigation through rationales for action
- Increases healthcare consumers' satisfaction and positive healthcare outcomes
- Increases rewarding and value for money
- Reduction of time wasted on inappropriate care options

**2. Design plan for forming a team of EBP champions and leaders**

- Champions as a model at the departmental/ team level
- Effective clinical leadership roles

**3. Assessing healthcare center's culture and resources**

- Communication channels and interaction system between staff and leader
- Financial resources
- Staff capacity and staff development system
- Leadership style
- Change agent (desire to change, and the flexibility of change)
- Facilitating factors (Willingness to recruit team and providing motivation incentives toward change)
- Supportive policies for EBP
- Barriers of EBP application

**4. Plan for building capacity of healthcare professionals**

- Integrate EBP as one of the essential staff development programs
- Develop a training program for EBP according to a participatory learning approach
- Recognizing and rewarding health care professionals
- Integrate journal club into the clinical environment, and educational interventions

**B. Application and Evaluation Phase:**

Box 5 displays the elements of the application and evaluation phase. This phase would be started with recruiting a multidisciplinary team that includes members representing all categories and specialties. The EBP team members should have adequate knowledge and skills related to EBP process. They should be a trustful and respectful relationship with their colleagues. A job description should be developed for the EBP team with consideration to their assigned clinical/administrative responsibilities at the healthcare center. The team leader should be selected and a clear role of the team leader should be determined. Necessary resources such as computers with internet access to the scientific database, conference room, and availability of EBP experts should be provided. The framework contains other structures for embedding EBP at primary healthcare centers. These structures are integrating the concept of EBP into the vision and mission of the healthcare center, and providing social support for the healthcare professionals in terms of rewards either financial and/or professional recognition. As well, it is important to allocate and determine a timeline for the

accomplishment of EBP activities. To strengthen the effective application of EBP approach, it is better to use one EBP application models such as “John Hopkins Model”, “Iowa Mode Model” or any other model of EBP application. Application of EBP approach should be piloted within one unit or team of the healthcare center firstly before generalizing it to the whole center. Piloting of EBP is essential for testing the designed plan for application and stating of corrective actions as well as configures a model of success. The final phase of the framework is the continuous evaluation of the implementation process of EBP approach, infrastructure, and intended outcome measures. Continuous monitoring and evaluation would be carried out by using the appropriate key performance indicators.

### **Box 5: Application and Evaluation Phase of the Framework for Embedding Evidence-Based Practice at Primary Healthcare Centers**

#### **1. Recruit a multidisciplinary team**

- The team should represent all categories of healthcare professionals, champion/ mentor persons, training staff and quality staff members
- The team should be large enough including (6-10) members
- The team should have the knowledge, and skills of EBP
- The team should have a trusting relationship and respect from all healthcare personnel
- The team members’ responsibilities are assigned according to their education and experience
- Review all job descriptions and integrate responsibility of EBP

#### **2. Determine team leader and his/ her role**

- The leader should identify, select a mentor to train, and educate staff about EBP
- The leader should identify and engage key HCPs and all relevant clinicians
- The leader should select EBP team members according to the academic level, previous experience, receptive to change, and having positive attitudes EBP
- The leader should involve all relevant personnel and foster collaboration between team members and management
- The leader should detect a clear role and responsibilities of the health care professionals in the implementation process

#### **3. Provide the necessary resources**

- Providing financial resources for providing the necessary equipment
- Presence of conference room space for the team to meet and discuss practice changes
- Provide adequate time for educational activities without any assigned activities.
- Provide computers with internet access at the clinical unit
- Provide access to scientific databases
- Clinical experts must be available to guide and mentor staff from the identification of a practical issue.

#### **4. Develop a structure of EBP**

- Vision and mission of healthcare center should focus on integrating EBP into all provided health services
- Provide rewards and incentives for staff
- Determine a timeline for the implementation process

#### **5. Select the EBP implementation model**

- Select the implementation model of EBP according to the feasibility of steps, a similarity with the practical process and decision-making process

#### **6. Pilot the outcomes of implementing EBP approach**

- Test the EBP intervention in one area before applying it to other areas

#### **7. Evaluation**

*The leader should evaluate and monitor:-*

- Health care professionals during implementation
- Evaluating infrastructure
- Evaluate the implementation climate
- Evaluation of outcomes by using key performance indicators

#### IV. DISCUSSION

Primary healthcare is an essential component of any healthcare system. The importance of primary healthcare refers to its concerns on prevention and population-centered approach. The effective and efficient primary healthcare system is the key to achieving universal health coverage and the health-related sustainable development goals. For this reason, primary healthcare requires workforce personnel who are well trained and competent in the application of EBP along with local expertise. The efficient amalgamation of EBP with the primary healthcare system will generate much better health and economic outcomes [26]. Perception and views of the healthcare providers are crucial guidance in stating strategies and frameworks for integrating EBP into healthcare services [27]. Accordingly, the present study aimed at designing a framework for embedding EBP approach in primary healthcare centers.

The exploration of the views of primary healthcare professionals and policy makers showed positive beliefs about the importance and benefits of EBP approach. They found EBP a beneficial approach for healthcare professionals, healthcare consumers and the healthcare center itself. Results of the current study are in agreement with previous studies that reported positive beliefs regarding EBP [27,28,29,30]. Participants of those studies found EBP is a mandatory competency for each healthcare professional at any discipline. They added that EBP is a backbone for professional development. The mentioned benefits are interrelated to each other, in which the improvement in clinical competencies and administrative competencies will ensure the standardization of the provided healthcare. Consequently, healthcare outcomes and consumers' satisfaction will be improved.

Regarding the requirement of implementing EBP, both the healthcare professionals and policymakers in the present study revealed identical views. They mentioned that training programs and effective leadership are essential for integrating EBP at primary healthcare centers successfully and productively. Additionally, they reported the provision of competent calibers in EBP and physical infrastructures are required. At the different region of the world such as the UK and Malaysia, the necessities of training and incorporating efficient leadership to sustain the application of EBP at primary healthcare facilities were emphasized [31,32,33].

At the same time, EBP experts who involved in this study suggested forming supportive strategies for applying EBP. They mentioned the importance of acquiring urgency needs for EBP among healthcare professionals and policymakers, building a well-trained team, and provision of the physical resources. EBP experts emphasized the importance of stating policies and regulations. Stating clear strategies for application of EBP was reported in other studies all over the world is essential to ensure the commitment of staff and sustainability of EBP application [34,35].

The designed framework for embedding EBP at primary healthcare centers of the present study was developed based on the reported views of healthcare professionals, policymakers and experts of EBP who involved in the study. Several kinds of researches indicated that it would be better to consider beliefs and perceptions of the target population in combination with expert opinions in developing strategies and frameworks for EBP application. These researches stated that understanding of the perception of healthcare workforce regarding EBP will deliver the best feasible strategies [27,34,36,37].

The designed framework embedding EBP in primary healthcare centers of the present study gave details on the planning for the application of EBP and application process combined with evaluation elements. Generally, the framework includes raising awareness about EBP for the purpose of initiation of culture change. In addition, recruiting leaders and EBP team, assessment of organizational culture and resources, as well as building capacities of healthcare professionals on EBP. The content of the current framework is aligned with the recommended strategies in other researches that emphasized on educational interventions, providing required resources in terms of internet access, and scientific database plus efficient and enthusiastic leadership [31,35,38,39,40].

#### V. CONCLUSION

The primary healthcare professionals and policymakers showed positive beliefs about the importance and benefits of EBP approach. They found EBP is a mandatory competency for each healthcare professional at any discipline and is a backbone for professional development. This designed framework embedding EBP in primary healthcare centers gave a valuable and resource tools on the planning for application of EBP and the application process combined with evaluation elements.

## VI. RECOMMENDATIONS

Based on the findings and conclusion drawn from the study, the following recommendations are suggested:-

The designed framework should be disseminated to the policymakers at primary healthcare centers and to be applied and evaluated for its achieved outcomes. Provision of supporting training programs and effective leadership for integrating EBP at primary healthcare centers should be emphasized. In addition to forming supportive strategies for applying EBP as acquiring urgency needs for EBP among healthcare professionals and policy makers, building a well-trained team, and provision of the physical resources. Also, raising awareness about EBP for the purpose of initiating culture change should be implemented. Further studies are needed to investigate the applicability of the designed framework for embedding EBP approach at primary healthcare centers.

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