



Establishing Evidence-Based Practices in Settings with Limited Resources: Case Studies of Achievements

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Article information	Abstract
<p>Article history: Received February 07, 2023 Accepted on June 19, 2023 Available online January 12, 2024</p> <p>Keywords: Nursing, Evidence-based Practice, Limited Resources</p> <p>Correspondence: Eman bana.kram2020@yahoo.com</p>	<p>Background. To improve the quality and scope of health care, health, and midwifery education should focus on developing a solid basis of evidence-based methods and optimal care practices adapted to the needs of different regions and cultures.</p> <p>Objectives. To describe success as an example of the establishment of evidence-based practices (EBP) Despite the difficult conditions and limited resources of the eastern Mediterranean region,</p> <p>Methods Nurses experts at the American Nurses the Midwifery Research Summit and the Amman Research Summit in Jordan presented seven examples of the transformation of research into practice in the region.</p> <p>Findings Nurses' experts at the American Nurses and Midwifery Research Summit in Amman, Jordan, presented seven examples from the region to translate research into practice.</p> <p>Results. These findings reflect the strong conviction of nurses in the eastern Mediterranean region that it is important to create a rich culture of BP and to promote the agenda through active health platforms. The link between evidence and action. The success of the six countries highlights the importance of clinical nursing research in the promotion of BP and quality patient care. The challenges encountered in these stories indicate the need to develop national and institutional strategic plans, finance, and prepare earthquake nurses for clinical nursing research.</p> <p>Conclusions These conclusions reflect the strong convictions of the nursing leaders of the eastern Mediterranean region that the creation of the rich culture and active health platform of BP is important to promote the agenda. Evidence linking to action. The success of six countries highlights the importance of clinical nursing research for BP and improved patient care. The challenges presented in these stories suggest the need to formulate national and institutional strategic plans, finance earthquake nurses, and prepare for BP's clinical nursing research.</p>

DOI: [10.33899/mjn.2024.182180](https://doi.org/10.33899/mjn.2024.182180), Authors, 2024, College of Nursing, University of Mosul. This is an open-access article under the CC BY 4.0 license (<http://creativecommons.org/licenses/by/4.0/>).

INTRODUCTION

In six regions, facilitated by regional offices. The Eastern Mediterranean region includes Afghanistan, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Palestine, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syria. In 2016, the World Health Organisation classified countries in the region (including Tunisia, the United Arab Emirates, and Yemen) according to the World Bank definition of income, including low-, middle-, and high-income countries. This gap in income groups makes it difficult to achieve the Millennium Development Goals of the WHO for the region. The production of solid science nursing knowledge depends on high-quality research to inform practices aimed at achieving the Millennium Development Goals (Salman et al., 2020). Furthermore, nurses should consider income categories in planning global research, as the principles of Western biomedical research may not apply (Bogren et al., 2023). Therefore, in low-income countries, nurses must understand the social environment, values, and culture of the proposed environment in the design of research and implementation strategies (Erlandsson et al., 2022). EMRO's national nurses are striving to acquire scientific knowledge of nursing but face the diversity of regional Member States. The initiatives of EMRO member states to create evidence-based practice platforms (EBP) are worth stating and learning (Bogren et al., 2022).

METHODS

To improve quality and access to health care, medical and midwifery scholarships should provide a solid foundation for intervention and best care practices that are relevant and specific to different regions and cultures around the world. Contribution to this clinical study of nurses and midwives in the eastern region.

The Mediterranean Region was held at Amman, Jordan, in July 2016. The summit aims to promote regional and regional partnerships. International relations to develop cooperation, share resources and expertise to increase clinical science knowledge capacity, and to transform regional priorities into priority needs for BP, as determined by regional nurses and midwifery nurses.

The summit was planned by regional nursing experts in cooperation with the School of Nursing at Columbia University and was funded by the President's Global Innovation Fund at Columbia University. The collaborators include the School of Nursing at the

University of Jordan, the Faculty of Nursing at the University of Science and Technology of Jordan, the Council of Nursing in Jordan, the Department of Nursing, the Faculty of Nursing at the University of Badr in Cairo, the Rac Hariri School of Nursing at the University of Beirut in the United States, the Faculty of Nursing at the University of King Abdulaziz, and WHO EMRO. The study surveyed 37 nurse leaders from 13 states in 22 states, most of whom participated in Delphi surveys to identify clinical nursing and midwifery priorities in their respective regions. At the Summit, participants in these regions shared their experiences in the development, planning, and implementation of evidence-based practice projects under challenging conditions, including internal conflicts, wars, limited resources, and research capabilities.

Evidence-based practice is a key factor in reducing the gap between clinical research and improved practice, as defined by Houser and Oman (2010). This paper aims to outline the successful establishment of EBP in a challenging and resource-limited environment. Highlights the achievements of nurses from six countries in the eastern Mediterranean in implementing the EBP.

Egypt (Fathy)

Egyptian nurses face various complex challenges in their professional roles and careers. Although nursing's primary objective is to provide superior patient care, most of Egypt's medical research has historically been limited to academic environments. Poston and Buescher (2010) point out that nurses who are at the forefront of direct patient care require extensive expertise, a comprehensive understanding of evidence-based practice (EBP) processes, and a wide range of computer-based skills. In 1998, Egypt established the Children's Cancer Hospital, which was the only hospital in Egypt to collect and maintain information on nursing practice.

The world symbol of cancer-free childhood, clinical nursing research, and the development of evidence-based practice departments in other regional hospitals. The Department adopts a philosophy of action research. Stringer (1996) emphasizes the importance of using a user-friendly language, rather than traditional scientific research being technical and complex. He describes action research as the repeated cycle of "observation, thinking, and action" where observation is information collection, thought is exploration,

analysis, explanation, explanation, and action is planning, implementation, and evaluation.

Egypt's children's cancer hospitals are a global symbol of noncancer children, pioneering clinical nursing research, and building evidence-based practice (EBP) departments in other regional hospitals. These departments adopt an action research philosophy that prioritizes the use of user-friendly languages rather than the technical complexity of traditional scientific research, as demonstrated by Stringer (1996). This approach aims to make research results more accessible to nurses and healthcare professionals, thus improving patient care.

He characterized action research as a cycle of observation, reflection, and action. In this sense, observation involves the collection of information, and reflection is similar to analysis. McFarns (1993) structured the discussion of action research within the framework of the problem-solving phase. As a result, the Department of Nursing Research and Evidence-Based Practice has begun to address the challenges of clinical nursing. This initiative led to the establishment of a specialized team in pediatric cancer hospitals that focuses on vein catheters to determine the incidence of infections. The planning, implementation, and evaluation stages of this process include rationality, analysis, interpretation, explanation, and subsequent actions. This method enables practical and systematic methods to improve nursing practice and patient outcomes.

Many children with cancer need frequent medications and blood withdrawal, so port catheters are used for this purpose. After the establishment of a specialized catheter nursing team, the rate of port catheter removal due to infections has decreased considerably.

The results of the project were presented at the 2012 International Cancer Nursing Conference, entitled 'Design of a specialized team of central vein catheter nurses in the pediatric cancer environment'. To expand the Department's work, we will establish a research and practice review committee to promote EBP culture, support and encourage nurses to participate in the process, disseminate information, and create an environment for nurses to operate and encourage. Research, audits, and quality improvement; and strengthening the synergy between nursing researchers, nursing practices, and the hospital mission. Membership includes 15 voting members (such as the Chief Nursing Officer, Clinical Nursing Staff,

Managers, Specialties, and Education) and the Chief Executive Officer.

At the end of the day, although many cancer patients are treated in the medical research protocol, these protocols often lack a clear definition of the nursing care needed for these patients. To address this gap, the department is focusing on the development of evidence-based nursing guidelines. These guidelines are intended to improve the understanding of the protocols, reduce the risk of errors and deviations in practice, standardise nursing care, and establish high standards of nursing care in treatment protocols. The initiative not only ensures coherence in patient care, but also contributes to the overall effectiveness and safety of treatment protocols.

Nurse researchers are essential to promote nurse knowledge and patient-centered care excellence (PPCE). However, support in the clinical setting is urgently needed to support these efforts. The Department of Nursing Research and Evidence-Based Practices provides essential structure and support to develop Evidence-Based Practice (EBP) in hospitals that care for vulnerable children. This support is essential to ensure that nursing practices are not only theoretically sound but also apply and are effective in promoting the outcomes of patients in these sensitive health settings.

Iraq (Ibrahim)

In 1933, Baghdad opened its first official nursing school, marking an important milestone in Iraq's development of nursing education (Garfield and Marton, 2003). In 1962, the University of Baghdad nursing school was founded under the auspices of the World Health Organisation (WHO). After this progress, in 1986, the College of Nursing opened a master's program, specializing in community health, medical surgery, mental health, and mother-child health nursing.

The expansion is driven by the growing need for qualified nursing faculty. However, following the third Gulf War, the situation deteriorated. The Iraqi nursing profession has declined dramatically in the past three decades due to isolation and neglect. This decline was recognized and highlighted in the 2008 WHO report, which emphasized the challenges and setbacks faced by the Iraqi nursing sector during this turbulent period.

In response to the challenges posed by Iraq's nursing sector, the Eastern Mediterranean Office of the World Health Organisation (WHO EMRO) hosted a

meeting with health experts in various Iraqi provinces to discuss the situation. This led to the formulation of a five-year national strategy for 2003-2008, as well as an official action plan for the development of nursing and midwifery.

The main result of the initiative is the establishment of more than 15 nursing schools in Iraq's universities. Furthermore, Iraq has adopted two basic levels of nursing education and progressively abolished all other levels to streamline and standardise nursing education. There is also a significant change in social perception and attitude towards nursing.

This change was accompanied by an important increase in nurses' salaries from less than \$10 a month to between \$800 and \$1500, reflecting a new appreciation and recognition of the profession. Furthermore, the population of nursing students has evolved, with a ratio of 3: 0 between female and male students. Another indicator of the growing status of nursing as a profession is the high academic achievement of nursing students, who achieved impressive results on the graduate examination. These changes constitute significant advances in the nursing profession in Iraq, improving the quality of education and the social value of nursing.

Kingdom of Saudi Arabia

Exemplar 1 (Altaweli). According to Thorp (2008), it is important to understand qualitative methods of influencing health professionals' behavior and decision-making. Changes in existing clinical practice are problematic (Belizan, Meier, Alterb, Cotazzi, Colomar, Buekens, 2007), but there is no conclusive evidence that health professionals can change their practice regardless of the clear formulation, design, and delivery provided (Thorp, 2008). The guidelines imposed by health professionals and health system managers are inconsistent, and gaps remain between recommendations and clinical practices (Fodgren, Consterno, Mayhew, Oma, Peru, and Shepperd, 2013). However, the experience described below has shown the effectiveness of EBP use.

The National Institute of Health and Clinical Excellence of the United Kingdom recommends that women and their children be separated in five years. Women should avoid the first hour after birth and be encouraged as soon as possible to contact their babies with their skin-to-skin contact (NICE 2015, p16). The World Health Organisation (2013) also recommended that newborns shower 24 hours after birth. If this is not

possible for cultural reasons, bathing time should be delayed for at least 6 hours to avoid high rates of hypothermia.

As a graduate student, I was assigned to a labor and delivery room and had the opportunity to change the practice of routine midwives after birth by bathing newborns. I noticed that for three months, 78% of the 130 newborns in the newborn intensive care unit were hypothermic. In the process of conducting observational research, I also identified several factors that could be associated with hypothermia, including staff lack of awareness of the risks of hypothermia, lack of equipment (radiation heaters), linens and towels, a very cold environment, the weight of the newborn immediately after birth without clothing, overload of work, insufficient communication between staff and parents, and the newborn's immediate bath.

At their request, the staff reported that the central air conditioning could not reduce the ambient temperature. After analyzing the data and identifying the problems, I recommended some solutions to promote the thermal regulation of newborns. In labor and delivery rooms, mothers delay baby bathing until the mother is transferred to postnatal care, covering the baby with dry and warm towels and contacting the skin with the skin within one hour of birth. These practices are now the standard of care. EBP was proposed as an important tool to improve maternal care quality (Turnan, Bluth, Narban, Osteran, 2006), and I learned the ability to identify workplace problems using EBP recommendations and implement solutions.

Exemplar 2 (Al-Naqshabandi, El Seesy). My work includes extensive direct contact with foreign nurses working at the King Abdullah University Hospital in Jeddah. My colleagues and I are concerned about the level of support they provide Saudi patients and we have taken this concern into small projects. 46 nurses in the cancer unit completed a patient advocacy tool (Bu & Jezewski, 2007). The quality of the activities on behalf of patients was high, but the attitude of advocating for social justice for patients was low.

To appropriately care for Muslim patients, we decided to hold a cross-cultural nursing information session during foreign nurse orientations and their stay in Saudi Arabia. Participating nurses are very sensitive to our encouragement to treat cancer patients, translating our concerns into EBP, and reorienting new nurses with cultural awareness and sensitivity. The study highlighted important issues to be considered when

recruiting medical professionals of different nationalities in hospital settings.

Lebanon (Noureddine)

As the knowledge and expertise of advanced nursing researchers is one of the conditions for developing scientific clinical and research projects, the successful history of Lebanon's experience in advanced nursing education deserves to be shared, a small country near Syria and Israel facing constant political, security and economic challenges. Lebanon's nursing profession has been struggling for more than 40 years to establish the Lebanese Nursing Order in 2002, a national organization that regulates the nursing practice and education. However, the current nursing practice law does not recognize advanced practitioners and calls for three levels of nurses: assistants, trained in technical programs, and licensed/registered nurses, trained in basic university programs (El-Jardali, Hammoud, Younan, Salman, 2014).

The Lebanese Nursing Union proposed to amend the law and add advanced training, education, administration, and research nurses. The bill has not yet received parliamentary approval. However, nursing schools offer master's degrees to prepare nurses for the role of advanced practice to meet the needs for high-quality nursing care. Many of these graduates have made a significant contribution to EBP. One of the few universities that hires clinical nurses is Liverpool University, which introduced systematic EBP guidelines for the treatment of patients with acute coronary disease and heart failure and monitored related quality indicators. Other doctoral nurses have conducted research using diabetics to improve their practices, such as conducting studies of nurses on pain management and diabetes knowledge and developing continuing education programmes for nurses in these fields (Abdullahman, Abu Sad Yerel, Yuriddin Niaddin, Yuriddin, and Kantar, 2016).

Other researchers, in collaboration with multidisciplinary teams, studied the complications of some patients, such as ventilator-associated lung infections (VAP) and the success rate of resuscitation, and used the results to develop VAP bundles and rapid response teams to improve patient outcomes. Graduate training and training enable nurses to implement EBP in clinical environments.

Somalia (Abubakar)

Most death rates occur in low- and middle-income countries, mainly in low-resource environments (McClure, Salem, Pastan & Goldberg, 2009). Stillbirth is a very emotional event and one of our nurses wrote a paper based on the experience of Somali mothers to describe the perception, care, and cause of losing babies at birth.

A visit to a maternity unit, which included 54 villages, one city, and three hospitals, including 240,000 women (75 women), was conducted in a survey of 70 women. All women had 2 to 5 deliveries, almost two-thirds had one birth, and the other 2 to 5 deliveries. Approximately half (54.7%) were satisfied with the support provided to employees at birth and postpartum, but hospitalized people were much more likely than home birthers to be satisfied with the care provided (77.3 %) and 20%, respectively, $p < 0.05$).

Although most women were not anxious or depressed, the project highlighted the huge problems of abortion in low-resource countries, the importance of staff support during pregnancy, and the urgent need for more clinical nursing research and EBP in this area.

Sultanate of Oman (Al Touby)

As Oneke, Ezeoha, Ndukwe, Oibo, Onwe, and Alakh (2013) pointed out, establishing research priorities is an important means of strengthening the health system and contributing to coordinating funding with national health needs identified by research evidence. The Sultanate of Oman has conducted strategic research on the need for health research and published priority publications on health research on the official website of the Sultanate of Oman Health. Efforts have been made to develop capacity, financing mechanisms, and appropriate use of recommendations to improve the provision of health services to ensure the establishment of systemic health research guidelines (Directorate for Research and Research, 2014).

This led all sectors of the Ministry of Health of Oman to develop strategic health research plans for the past year. One of the main sectors is the medical nursing service. In 2012, a group of clinical nurses from all regions was established, consisting of 15 clinical nurses interested in research and BP.

Several capacity-building workshops were held to help clinicians improve their research skills. This led to three proposals for clinical nursing projects and regional trainer training. In 2012, two national seminars were held, where more than 700 nurses explored the priorities of clinical nursing projects and developed capacity (Research and Study Directorate

2015). The impact of training clinical nurses to lead EBP initiatives is beneficial both for the provision of services and patient care because these nurses will use their experience and make recommendations related to the health environment (Misso, Ilic, Haines, Hutchinson, East, and Teede, 2016).

Following the success of the 2012 initiative, the Ministry of Health Department of Nursing met with a second group of 25 clinical nurses from various regions of Oman to train. The second workshop was organized, with 14 submitted proposals, 12 of which were approved by the Ethics Committee of the Ministry of Health (Directorate of Research and Studies, 2015).

In 2014, the EBP continued to build capacity for Omani nurses with two-week workshops, one-week advanced training, and one-week mentoring. In 2014, an ethical review was submitted for the study on "Wissenschaften und Kenntnisse des Oman Code of Professional Conduct of Nurses and Midwives". In 2015, four nursing clinical proposals were approved for funding by the Ministry of Health National Research Fund (Directorate of Research and Studies, 2015).

Discussion

The success stories of six eastern Mediterranean countries highlight the importance of clinical nursing research in the development of medical care. Advance EBP and patient quality care. The challenges facing nursing professionals in the implementation of EBP are similar around the world, including the development of national and institutional strategic plans, funding, and the preparation of qualified nurses for clinical trials (Lehane et al., 2019).

Nursing research and participation in scientific dissemination and implementation. The main obstacle to collecting basic information on best practices is funding. Two field studies of clinical and midwifery research published in Africa and the eastern Mediterranean showed the worrying gap between funded and published projects, the clinical priorities identified by nurse practitioners in each region, and the main problems and needs identified (Engels et al., 2020).

Given the limited resources and concentration challenges facing some EMRO countries, it is important to ensure that the EBP strategy plan does not focus on funding sources but on priorities. This applies all over the world because funding carries greater priority than real priorities when establishing the EBP Strategic Plan; nurses must respond by identifying

priorities in advance and negotiating sources of funding to establish funding according to established priorities. The story also emphasizes the impact of clinical nursing research on improving patient outcomes. Although it is difficult to translate the best evidence into practical practice of rigorous clinical nursing research, regional nurses find it beneficial to improve patient care quality through translation efforts. As shown in Egypt, especially the attitude of nurses towards the implementation of EBP and patient participation can be promoted by setting up support systems managing systems, and a working environment that incorporates clinical application research.

Therefore, nurses in every health environment around the world believe that translating the best evidence into action is satisfactory. These countries and health institutions are based on investment in capacity building and nursing training in clinical nursing research. It is important to provide training and education opportunities to clinical research nurses, to support them in their roles, through continuing professional development programs such as workshops, seminars, or conferences, and formal postgraduate programs such as master's and doctoral programs.

This allows nurses to conduct and translate clinical research. Nurse leaders are encouraged to continue professional development programs to improve nurses' and nurses' skills in countries where resources around the world are limited. Sharing best practices around the world and sharing lessons from each other will contribute to the construction of capacity, and its impact on cost-effectiveness is limited.

The Delphi study was discussed at the Amman Summit, which explored the importance of establishing regional research priorities and EBPs in the strategic planning of regional clinical nursing research. Some stories relate to the development of a system and a strategic plan for clinical nursing research, as well as the establishment of a department in health facilities focused on the translation and implementation of research.

This reflects the strong belief of nurses in the EMRO region that it is important to establish a rich culture of EBP and is taking active steps to create a health-focused platform to continue the program. The willingness of the European Community (EMRO) to

share, cooperate, and promote EBP is a global example of the progress of nursing careers.

References

- Bogren, M., Alesö, A., Teklemariam, M., Sjöblom, H., Hammarbäck, L., & Erlandsson, K. (2022). Facilitators of and barriers to providing high-quality midwifery education in South-East Asia-An integrative review. *Women Birth*, 35(3), e199-e210. <https://doi.org/10.1016/j.wombi.2021.06.006>
- Bogren, M., Jha, P., Sharma, B., & Erlandsson, K. (2023). Contextual factors influencing the implementation of midwifery-led care units in India. *Women Birth*, 36(1), e134-e141. <https://doi.org/10.1016/j.wombi.2022.05.006>
- Engels, C., Boutin, E., Bousely, F., Bourgeon-Ghittori, I., Couturier, B., Fromantin, I., Lafuente-Lafuente, C., & Canoui-Poitaine, F. (2020). Use of Evidence-Based Practice Among Healthcare Professionals After the Implementation of a New Competency-Based Curriculum. *Worldviews Evid Based Nurs*, 17(6), 427-436. <https://doi.org/10.1111/wvn.12474>
- Erlandsson, K., Jha, P., Sharma, B., & Bogren, M. (2022). Contextual factors influencing the implementation of a new midwife education programme in India: a qualitative study. *BMC Med Educ*, 22(1), 755. <https://doi.org/10.1186/s12909-022-03814-9>
- Lehane, E., Leahy-Warren, P., O'Riordan, C., Savage, E., Drennan, J., O'Tuathaigh, C., O'Connor, M., Corrigan, M., Burke, F., Hayes, M., Lynch, H., Sahn, L., Heffernan, E., O'Keeffe, E., Blake, C., Horgan, F., & Hegarty, J. (2019). Evidence-based practice education for healthcare professions: an expert view. *BMJ Evid Based Med*, 24(3), 103-108. <https://doi.org/10.1136/bmjebm-2018-111019>
- Salman, A., Fakhraldeen, S. A., Chun, S., Jamil, K., Gasana, J., & Al-Hunayan, A. (2020). Enhancing Research and Development in the Health Sciences as a Strategy to Establish a Knowledge-Based Economy in the State of Kuwait: A Call for Action. *Healthcare*, 8(3).