Saudi Journal of Medicine and Public Health

https://saudijmph.com/index.php/pub

https://doi.org/10.64483/202412238

The Importance of Continuing Education for Nurses

Mohammed Al Hassan Abu Taleb [(1)] , Fahad Hashr Alanazi [(2)] , Ayed Shlash Shlash ALshammari [(3)] , Faisal Awad Alshan [(4)] , Ibrahim Hassun Obid Aldossri [(5)] , Fahd Mardi Bakit Al-Dosari [(6)] , Talal Awadh M ALSulays [(7)] , Eman Kuliab Aldhafeery [(8)] , Alfaten Khalf Alshammri [(9)] , Reem Munawar Awad Al-Rashdi [(10)] , Jaiz Nahi Nawi Aldoferi [(11)] , Sattam Mohammed Abdulrahman ALfouzan [(12)] , Ahmed Abdulaziz ALiumaiah [(3)] , Nawaf Mohmmed M Alqahtani [(12)]

(1) Prince Mohammed Bin Nasser Hospital, Ministry of Health, Saudi Arabia,
(2) ALyammamah Hospital, Ministry of Health, Saudi Arabia,
(3) Ministry Of Health, Saudi Arabia,
(4) Complex Eradh / Jeddah, Ministry of Health, Saudi Arabia,
(5) Wadi Al , Dawasir General Hospital, Ministry of Health, Saudi Arabia,
(6) Alsulayyil General Hospital , Ministry Of Health, Saudi Arabia,
(7) Al-Imamah Hospital, Ministry of Health, Saudi Arabia,
(8) Al Yamamah Hospital , Ministry of Health, Saudi Arabia,
(9) Hospital Alyamamah, Ministry of Health, Saudi Arabia,
(10) The First Health Cluster In Riyadh, Ministry of Health, Saudi Arabia,
(11) King Khalid General Hospital, Ministry of Health, Saudi Arabia,
(12) Al-Quwayiyah General Hospital , Ministry of Health, Saudi Arabia.

Abstract

Continuing learning is a pillar of current nursing practice that is needed to achieve professional competence, improvement of patient care, and lifelong learning. This study will investigate the importance of continuing education in nursing, the historical events, professional requirements, clinical advantages, development of leadership, and international outlooks. It also brings out the linkage between continuing education and evidence-based practice, importance of technology, and how to close the gap between theory and practice. Obstacles in time, finances, and organization are mentioned, and solutions to increase the opportunities in education are addressed. The paper highlights economic, organizational and ethical benefits of investing in nurse education. Through the combination of theoretical understanding, practical skills, and reflective practice, continuing education also makes nurses flexible, competent, and able to deliver high-quality, patient-centered care to patients in the changing healthcare settings.

Keywords: Continuing education, professional development, nursing practice, evidence-based practice, clinical competence, lifelong learning, nurse leadership, patient care quality.

Introduction

Nursing is a dynamic and evidence-based field, which requires constant learning and changes to the developing healthcare issues. Continuing education is a key process of ensuring professional competence, clinical knowledge upkeep, and high quality care to the patients. Nursing practice integration of continuous learning is not only a professional but also ethical responsibility, which ensures accountability, reflective practice, and evidence-based decision-making. Nursing education has come to acquire different forms of development as apprenticeships in the hospitals to the systematic form of education during the years not only focusing on theoretical knowledge but also on practical skills. Due to the development of the new technology, the internationalization of standards in healthcare and the growing sophistication of patient demands, continuing education has been the key to closing the gap between the theory and practice, developing leadership skills, and encouraging interdisciplinary cooperation. Although its significance has been realized, nurses are hindered in their participation by barriers such as time, financial constraints, and organizational barriers. This study looks into the versatile nature of continuing education in nursing, its influence on clinical competence, the quality of care provided to patients, professional development, and the performance of organizations and gives suggestions as to how to

*Corresponding author e-mail: Abutalib.1270@gmail.com (Mohammed Al Hassan Abu Taleb).

Receive Date: 2 December 2024, Revise Date: 27 December 2024, Accept Date: 31 December 2024

maximize the role of learning and learning outcomes.[1,2]

Nursing Professional Development Overview

Professional development in nursing is the ongoing process whereby nurses are able to expand their knowledge, skills and competencies to enhance their practice, improve patient outcomes and also to advance their careers. It includes both the formal and informal learning experiences including workshops, seminars, conferences, academic courses, certifications and on-job training. In the healthcare sector, the technology is dynamic and ever-changing with the advent of new research results, emerging health issues, new challenges; hence, the nurses have to consider life-long learning as a method of staying clinically competent and providing safe and evidence-based care.[2] Professional development is a personal, organizational and moral obligation. Nursing regulatory bodies and professional associations usually compel nurses to undertake continuing education as one of the requirements to retain licensure and professional standards. The supporting staff education is also beneficial to hospitals and healthcare institutions as it increases patient satisfaction, decreases errors, and results in an efficient healthcare team. In addition, professional development leads to job satisfaction and motivation in nurses, which minimizes burnout and turnover rates.[3]Reflective practice is an essential part of professional development as it prompts nurses to check their experiences and define their areas of improvement and apply better performance strategies. Moreover, mentoring and nursing collaboration maximize the learning experience and increase the culture of excellence in the nursing practice.In the current health care environments, professionals have grown past being clinically skilled to leadership, communication, informatics, and cultural competence. Such a holistic treatment will be able to make the nurses ready to meet various patient needs, change with the evolving healthcare settings, and acquire specialized roles in nurse educators, researchers, and administrators. Finally, professional growth in nursing is the pillar of good healthcare provision, as well as crucial investment in individual and organizational achievements.[4]

History of Nursing Education and its Development

The history of nursing education is the history of the overall development of healthcare, social transformation, and the professional growth. Nursing that was once regarded as a charity or housewife job that was primarily done by women has evolved into an evidence-based profession with organized education and licensing regulations. Modern nursing education originated in the middle of the XIX century, and in many ways, it was shaped by Florence Nightingale, who was the one to give importance to the value of sanitation, discipline, and systematic education of nurses. This started with formation of formalized nursing education in 1860 when she established the Nightingale Training School of Nurses at St. Thomas hospital in London.[5]During the early 20 th century, the number of nursing schools was increased globally, with most of them being located in hospitals that provided students with practical training. But initial programs have been criticized to have had more emphasis on hospital service than academic learning. By the mid 20th century, changes in nursing education saw the transition of nursing education out of hospitals and to universities, and the combination of theoretical knowledge, scientific research, and clinical practice. This scientific shift of nursing from being a vocation to a profession based on science and ethics.The last 20 th and early 21 st centuries were marked by the blistering development of technology, medical research as well as the global health issues triggering one more evolution of nursing curricula. Nursing education started focusing on critical thinking, leadership, evidence-based practice, and interprofessional collaboration. Graduate and doctoral programs came up in preparation of nurses to take on advanced clinical, administrative and research positions.[6]Currently, nursing education is accommodative of lifelong learning and continuous growth of the professional to stay abreast with the evolving nature of healthcare. Simulation-based training, e -learning and global educational standards integration will make nurses skilled, flexible, and cultural responsive practitioners. On the whole, nursing education development is a process of transformation of the apprenticeship into the academic field, i.e., the shift of nursing to the position of one of the pillars of the modern healthcare system and one of the primary forces behind patient safety and quality care.[7]

Defining Continuing Professional Development (CPD) in Nursing

Continuing Professional Development (CPD) in nursing is a continuous systematic, and self-managed process that helps nurses to retain, improve and extend their knowledge, expertise as well as professional aptitude across their careers. Contrary to the supportive current continuing education, which tends to seek courses or credits, CPD is a comprehensive concept that includes formal learning experiences such as workshops, seminars, and academic courses as well as informal experiences that include reflective practice, mentorship, clinical experience, and peer learning. The main objective of CPD is to make sure that nurses are competent to provide high-quality and evidence-based care in a constantly evolving healthcare setting.[8]Professional nursing organizations and regulatory agencies around the world consider CPD a crucial aspect in the process of maintaining the licensure and professional standards. It helps nurses to maintain compliance with the latest clinical guidelines, technology, and ethical requirements. It is stated that CPD encourages life long learning and professional accountability, which

enable nurses to engage in career development and professional growth according to the International Council of Nurses (ICN).There are various important components of effective CPD, and they are defining the learning needs, establishing specific goals, participating in specific learning processes, transferring new knowledge to practice, and assessing the results. Such a cyclic process is beneficial to not only increase personal competence but also help to improve the organization and improve patient outcomes.[9]CPD is now more than clinical knowledge and is a combination of leadership, communication, research literacy, cultural competence, and digital health skills in the current healthcare scenario. Through CPD, nurses are able to better address the needs of patients with complex needs, engage in interdisciplinary teams and changing healthcare systems. Finally, CPD in nursing is not only a professional responsibility but also a moral obligation, that is, nurses provide care that is safe, effective, and compassionate and contribute to improving the standards of nursing profession.[10]

Role of Lifelong learning in Nursing Practice

Lifelong learning is a self-directed process of learning and practicing in a nursing practice continuously over the career of a nurse. It underpins the ability to behave in a professional competence, to adapt to the technological changes, and to satisfy the changes in the healthcare systems requirements. As an evidence-based profession with constant dynamic, nursing demands that practitioners keep up with emerging clinical, research-based, and patient care innovations and findings. Hence, lifelong learning is not a discretionary undertaking: it is a crucial part of providing safe, effective, and high-quality nursing practice.[11]Lifelong learning is not limited to formal learning or certification. It means reflective practice, critical thinking, mentorship, collaboration and engagement in professional organizations. The activities are what help nurses keep improving on their judgment, clinical decision-making, and communication. The process helps nurses integrate theory in practice, thereby facilitating the provision of evidence-based interventions and facilitating improved patient outcomes.Lifelong learning concept is closely related to professional accountability. To maintain professionalism, nursing regulatory bodies and institutions promote or require continuing education. Lifelong learning is also essential in career growth and nurses are able to shift into more advanced positions like educators, researchers and leaders. Through continuous learning, not only do nurses improve their knowledge and skills, but also empower the entire medical sector.[12]Lifelong learning encourages flexibility and creativity in the health care world today: the environment where technological advances are rapidly enhanced and patients have sophisticated needs. It enables nurses to apply new tools including electronic health records, telehealth systems and simulation technologies efficiently. Moreover, it instills the culture of inquiry, where nurses engage in vigorous pursuit of enhancing care by conducting research and quality improvement activities. In the end, lifelong learning in nursing practice helps to cultivate personal, professional and lifelong caring, so that nurses can be competent and caring in an ever-changing profession.[13]

Ethical and Professional Obligations Towards Continuing Education

Continuing education in nursing is not only a professional requirement but also a moral requirement founded on the need of the nurse to offer safe, competent, and evidence-based care. Nurses have the responsibility of upholding professional competence by engaging in lifelong learning as specified in the Code of Ethics of Nurses by the various institutions, including the International Council of Nurses (ICN) and the American Nurses Association (ANA). Such an ethical requirement will keep nurses abreast of new healthcare practices, technologies, and research studies that have a direct impact on patient results.Professionally, lifelong learning facilitates accountability, integrity and devotion to perfection. It enhances the trust of the patient, families and the society to this nursing profession. Nurses prove respect to human life, patient safety, and the risk of medical errors reduction by keeping abreast of new standards of care. In addition, the need to provide evidence of continuous education is common in licensure renewal by professional nursing organizations and regulatory agencies, which demonstrates its vitality in preserving professional standards.[14]Morally, failure to participate in continued education may result in practices that are not up to date, hence, jeopardizing the patient safety or quality of care. This means that nurses have a moral responsibility of seeking learning opportunities that make them competent and in line with the current evidence-based practices. This responsibility also falls on the employers and healthcare institutions which offer access to educational materials, training and development opportunities.[15]continual learning promotes ethical decision-making as it will provide the nurses with the knowledge to navigate complicated clinical and ethical scenarios. It promotes thoughtfulness, cultural awareness, and ethical behaviors, which include beneficence, nonmaleficence, and justice. The continued education as such is thus both a professional obligation and an ethical obligation; in other words, the nurses must uphold the best practices and the integrity of the nursing profession.[16]

Effects of Continuing Education on the Quality of Patient Care

Continuing education is important in enhancing quality of care provided to patients since it will ensure nurses are competent, knowledgeable and responsive to the dynamic demands of the healthcare systems.

With the development of medicine and the appearance of newer technologies, treatments, and evidence-based practices, nurses have to keep on updating their knowledge and skillset to deliver safe and effective care. Continuing education is a mediator between the existing practice and the recent developments in healthcare directly affecting the patient outcomes, safety, and satisfaction.The literature is always consistent on this point, nurses who pursue continuous professional growth provide better care, make more correct clinical decisions and are more equipped to deal with complex clinical situations. Life-long learning supports critical thinking, clinical reasoning and problem-solving skills- all of which have the potential to improve patient safety and minimize medical errors. Moreover, a highly educated nurse can better apply evidence-based interventions or adhere to new clinical guidelines and identify early warning signs of patient decline.

Continuing education enhances uniformity and standardization of care as well. Healthcare organizations can achieve homogeneity in the quality standards by providing all nurses regardless of their levels of experience with the same updated knowledge. This not only enhances the patient outcomes, but also the credibility and reputation of healthcare institutions.[17] Also, the continuing education will enhance effective communication and collaboration between healthcare professionals. Nurses become more collaborative, leading-stronger, and interprofessional through workshops, seminars, and interprofessional training, that would bring coordination and holistic patient care. The net effect is an improved, safer, and patient-centered health care setting.lifelong learning is an important investment in the quality of patient care. It is the way to enhance the healthcare systems as nurses are empowered to keep up to date, feel confident, and competent enough to guarantee that the patient obtains the best possible care which is backed by the latest scientific evidence.[18]

When and how to improve Clinical Competence Continuous Learning.

To improve clinical competence in nursing, continuous learning is necessary, since it ensures that nurses possess the knowledge, technical and critical skills needed to take care of their patients safely and effectively. Clinical competence can be defined as the capability to use theoretical knowledge in the clinical practice, combined with the factors of evidence-based practice, ethical reasoning, and professional standards. In the current fast-paced healthcare situation in which medical technologies, treatment approaches, and the needs of patients are constantly altering, life-long learning is bound to help nurses to be competent and confident in their clinical practices.[19]With the support of continuing education programs, workshops, simulations, and online training, nurses might renew their clinical skills, acquire new procedures and deepen their skills in making informed clinical decisions. The aspect of continuous learning also facilitates the ability to be flexible enabling nurses to be responsive to the complex and diverse healthcare challenges. Through reflective practice and self-assessments, nurses are able to detect gaps in knowledge and pursue specific learning experiences to close them in order to enhance the quality of care they offer.In addition, lifelong learning encourages a professionalism and responsibility culture in medical institutions. A situation arises in which nurses are engaged in their own learning and thus help generate a common standard of excellence, and this improves the general patient safety and outcomes. It also equips nurses with the advanced clinical roles, leadership, and interdisciplinary collaboration, which makes the whole healthcare team stronger.[20]The implementation of evidence-based education in clinical practice is a way to make sure that the interventions used by the nurse are based on the recent scientific discoveries. Such a strategy enhances patient recovery and satisfaction, as well as errors and care delivery variation. Finally, a fundamental aspect of clinical competence is continuous learning because it equips nurses with the skills to apply new knowledge to practice and uphold high-quality standards of care and respond to the constant changes in healthcare so that the quality of their clinical work could correspond to the utmost professional requirements.[21]

Continuing education and evidence-based practice and their relationship

Even continuing education and evidence-based practice (EBP) are deeply related, which has recently become the cornerstone of the contemporary nursing profession and quality care of patients. Evidence-based practice is the use of optimal available research evidence, clinical experience together with patient preferences to make nursing decisions. Continuing education is the very means that gives nurses the most recent research results, develops their analytical abilities, and transfers scientific knowledge to the clinical practice. The lack of continuous education exposes nurses to the threat of using obsolete practices that could undermine the safety and effectiveness of the treatment offered to patients.[22]Continuing education provides nurses with the skills on how to critically evaluate research, the interpretation of data, and application of evidence based interventions in their practices. Professional development courses, workshops, and other training programs based on EBP methodologies enable nurses to challenge their routine and embrace the approaches backed by empirical evidence. The process does not only enhance the quality of care, but it also fosters the culture of inquiry and life long learning in healthcare organizations.[23]In addition, continuing education will enhance cooperation among clinicians, researchers, and educators and the gap between theory and practice. Nurses with an EBP-centered education are better apt to undertake research initiatives, take

part in policy formulation as well as spearhead quality improvement initiatives. This type of involvement guarantees that the nursing care keeps changing with the development of medical science, technology, and the needs of patients.[24]Continuing education and EBP also increase the confidence and professional autonomy of nurses. Nurses can make scientifically and patient-centered care decisions, promote best practices, and make informed decisions by relying on evolving evidence and applying it in practice. Finally, the sustained education serves as a catalyst to effective adoption of evidence-based practice, as it keeps the nursing care up to date, effective, and connected with the world standards of healthcare excellence.[25]

Helping people understand the theory-practice difference

Making theoretical knowledge practical in clinical nursing is one of the greatest issues in the nursing field. The education of nurses offers the basis of evidence-based information, morality and ability to think critically, but unless continuous development of professional skills, all theoretical information might not be converted into better patient care. Continuing education is essential as it is a connection, which allows nurses to transfer classroom knowledge, research findings, and policy into clinical practice.[26]The gap between theory and practice needs to be bridged with the help of experiential learning, reflective practice, mentorship, and access to up-to-date evidence. The training, workshops, and practical clinical experiences enable nurses to train in complex procedures and decision-making in safe, controlled settings through simulation basis. This is more than just a way of solidifying the ideas of theory but also a way of gaining confidence and competence in the practical world. Through such learning, nurses will be well placed to be able to identify the needs of patients, foresee complications and provide care in an effective way. Moreover, reflective practice forms an important part in the combination of theory and practice. Through critical evaluation of clinical experiences, nurses can recognize the difference between the anticipated outcomes and the actual results and thus they can modify interventions, develop skills and utilize new knowledge in their future practices. This integration is also aided by mentorship programs which offer guidance, feedback and role modeling through more experienced clinicians which further enhances the relationship between academic preparation and practice.[27]The distance between practice and theory can be also reduced with the help of institutions, including the possibility to access continuing education programs, clinical guidelines, and interdisciplinary collaboration. Lifelong learning can help nurses to better implement evidence-based interventions, follow best practices, and respond to changes in healthcare technology and patient needs.Simply put, the conduct of nursing care must be informed by science and must be clinically effective, which is guaranteed by bridging the gap between theory and practice. It improves patient care, professional development, and adds to excellence culture in health care provision.[28]

Continued Education, Leadership Development in Nursing

Continuing education is a key factor in the development of leadership skills in nurses, as it is familiarizing them with the roles that impact patient care, healthcare policies, and the performance of an organization. Nursing leadership involves possession of skills to lead teams, make informed choices, apply evidence-based practices, and represent both patients and employees. Through the practice of continuing education, nurses are equipped with the knowledge, competencies, and confidence that they need in order to perform these responsibilities.[29]Some of the common subjects in leadership-based continuing education programs include strategic planning, quality improvement, conflict management, team building, communication skills and ethical decision-making. These programs enable nurses to leave direct patient care behind and advance to such advanced positions as nurse managers, clinical coordinators, educators, and policy advisors. Through such abilities, nurses would be able to make a difference on organizational efficiency, team collaboration, and create a culture of safety and accountability.lifelong learning promotes reflective practice and critical thinking, both of which are needed to be good leaders. Nurses who engage in professional growth opportunities are in a more position to handle complicated clinical and administrative problems, foresee possible problems, and apply remedies based on evidence. This positive intervention improves employee satisfaction and patient care.[30]Continuing education can also be supported institutionally to enhance leadership development through offering mentorship, leadership development workshops and interdisciplinary collaborations. Through these experiences, nurses develop networks, exchange knowledge, acquire practical experiences in team and healthcare management processes.the connection between professional competence and leadership ability is enhanced by the aspect of continuing education. It helps nurses to take authoritative positions in a healthcare organization, drive changes in practice, promote innovation and develop the nursing profession overall through imparting knowledge, critical thinking, and strategic skills. Continuous learning is thus considered not only the key to personal career development but also ensuring the quality and patient-centered care at high levels.[31]

Role of technology in the advancement of nursing education

Modern nursing education has embraced technology as a staple in the learning process to change the way nurses learn, acquire skills and competence as

professionals. With the incorporation of technological tools into the learning process, more interactive, flexible, and effective learning processes become possible, which is paramount to equip nurses with readiness to address the demands of the modern healthcare.Online courses and e-learning platforms and virtual classrooms enable nurses to receive educational materials at all times and places, regardless of their schedule and geographic limitations. Multimedia material (videos, interactive quizzes, discussion forums and others) is presented on these platforms and they contribute to more advanced insight and recall of complex nursing concepts. Furthermore, technology helps to support self-paced learning, which allows the nurses to concentrate on the areas requiring improvement and monitor their improvement over time.[32]Another important development in nursing education is simulation technology. The high-fidelity simulators and virtual reality (VR) environments can enable nurses to apply clinical procedures, decision-making, and emergency responses in a risk-free environment. These simulations are based on real-world scenarios, which are aimed at rendering nurses to think critically, reason clinically, and acquire practical skills prior to facing such similar situations with real patients. Such experiential learning does not only increase competence, but also confidence and decreases the chances of committing clinical practice errors.[33]Also, technology can be used to facilitate evidence-based practice by accessing the current research, clinical guidelines and decision support tools. The digital health application and Nursing informatics systems assist nurses in combining the theoretical knowledge with patient care, as they allow nurses to make informed decisions based on data. Technology adoption also contributes to collaboration and networking of healthcare professionals by means of online communities, webinars, and professional forums. Nurses are able to exchange knowledge, learn through the best of the best around the globe and also experience interdisciplinary learning opportunities that enhance the overall healthcare provision.[34]technology can be used to improve nursing education by simplifying learning, making it interactive and practical. It advances lifelong learning, enhances clinical competence, and prepares nurses to provide high-quality care with a patient-centered approach in a highly dynamic healthcare setting.[35]

Obstacles and impediments to lifelong learning in nurses

Although the necessity of continuing education as a part of nursing practice is acknowledged, a number of obstacles and issues may impede the involvement of nurses and restrict the effectiveness of professional development courses. Knowledge of these barriers is critical in influencing healthcare organizations and policymakers come up with plans that facilitate lifelong learning and increase clinical competence.Time constraints is one of the major challenges. Nurses are highly exposed to work in demanding environments that often come with long working hours hence have little time to engage in educational activities. Striking a balance between work and family, including further education needs, may be especially tricky, particularly in high-acuity facilities or whenever an institution is understaffed.[36]Financial constraints are also major threats. Attendance at workshops, courses, certifications or conferences can be associated with registration fees, travel costs and lost working time. Many nurses cannot take up these opportunities due to lack of institutional support or funding resulting in differences in the development of the profession. Also, organizational support may not be there to facilitate continuing education. Certain healthcare facilities do not place emphasis on professional growth, they do not avail learning materials, and the lack of programs that facilitate staff development. A society with low esteem on education will dishearten nurses to grab the chances of honing skills.[37]Geographical barriers are also other difficulties, particularly among nurses in the rural or remote areas whereby access to training facilities and specialized programs are minimal. In addition, technological constraints like inabilities to use e-learning platforms or insufficient internet connectivity may decrease the impact of online education programs.[38]personal aspects like lack of motivation, fear of failure or lack of awareness on learning opportunities might not allow nurses to participate in continuing education. These challenges need a complex solution that can include flexible working hours, financial assistance, mentorship, and the development of a culture where professional development is treated as an important process.[39]These barriers can be identified and overcome by healthcare organizations to promote the involvement of nurses in the continuing education and eventually increase the clinical competence, patient outcomes and overall quality of care.[40]

Motivations and Attitudes to Professional Development

The role of motivation and attitudes in the process of engagement of nurses to professional development and continuing education is crucial. Intrinsically motivated nurses (motivated by personal development, professional pride, or a wish to deliver quality patient care) are more inclined to seek learning opportunities on a regular basis. Institutional recognition, promotion opportunities or financial incentives are extrinsic factors but tend to be less effective in maintaining long-term engagement as compared to intrinsic motivation.[41]The positive attitudes towards learning correlate with increased level of engagement, improved knowledge learning and successful transfer of professionally gained skills into clinical practice. Professional development is approached with eagerness and dedication by the nurses who consider continuing education as a chance to gain competence, keep in touch with the changing

healthcare practices, and influence patient outcomes positively. On the other hand, negative attitudes, including views of education as a heavy burden, irrelevant, or time consuming may result in disengagement and low attendance of development programs.

Various aspects affect the motivation and attitude to professional development. A positive learning culture is provided by organizational support in the form of availability of training, mentoring, and rewarding learning accomplishments, which also promote active participation. Empowering, autonomy, and professional development leadership styles enhance motivation among the nursing personnel as well. Moreover, personal issues like self-efficacy, career goals and past experiences in learning influence the perception and desire of nurses to engage in continuing education.[42]The key to the effective development of professional development programs is to understand and respond to the motivational factors. The engagement can be improved by such strategies as flexible scheduling, focused learning in accordance with the clinical role of nurses, and application of adult learning principles. The positive attitudes are further enhanced with the promotion of a culture that appreciates lifelong learning and rewards achievements, which eventually leads to better clinical competence, quality of patient care, and overall professional satisfaction.[43]

Policies and support institutions of nurse education

It is also important that institutional support and properly developed policy frameworks facilitate the concept of nurse education and the success of continuing professional development programs. Healthcare facilities are particularly significant in the provision of the environment that will support learning, skill development, and career advancement among nurses. By focusing on professional development, institutions not only become more clinical competent, but also more patient-safe, more satisfied with employees, and more effective as a whole.[44]The institutional support may take different forms such as access to learning materials, workshop or courses funding, paid study leave, mentorship system and interdisciplinary learning opportunities. Giving the nurses the time, resources and support to continue education is a sign of professional growth and a development of the culture of life long learning. The support of leadership plays a significant role, especially in motivating nurses to learn regularly, as it is the role of managers and supervisors to support staff development.[45]Both organizational and national policy framework offer a framework and accountability to nurse education. Controlling institutions usually prescribe continuing education as a condition of licensure renewal, where there are minimum competence and professional practice levels. The national policies can also establish some standards of the curricula, approval of educational programs, and inclusion of evidence-based practice into ongoing education programs. These frameworks make the education of nurses standard, available and in line with international best practices.Additionally, other institutional policies such as promotions, salary raises, or professional certifications as rewarding educational accomplishments encourage participation and improve the importance of lifelong learning. The connection between learning and career development is further enhanced by the inclusion of education in performance appraisals and career development plans.[46]institutions have a vital role to play in ensuring that nurses are empowered to undertake continuing education. They establish a culture of learning, accountability, and professional development, which eventually enhances clinical competence, patient outcomes, and quality of healthcare provision.[47]

The economic and organizational advantages of educated nursing personnel

Well-trained nursing personnel are associated with great economical and organizational benefits to the health facilities. Continuous education and professional development help improve the skills and knowledge of nurses and their clinical competence, improving the outcomes of patients, minimizing errors made and avoiding unnecessary complications. Such enhancements directly affect the finances, such as the decreased expenses of the hospital-acquired infections and readmissions, as well as the increased length of stay. Health care organizations can become more efficient in terms of their operations and resources use by promoting high quality of care.[48]Organizational-wise, a highly trained nursing labor force leads to high staff retention and work satisfaction. Engaged nurses should experience lifelong learning and professional growth and be more valued, motivated, and confident in their functions. This will minimize the rates of turnover, reduce the cost of recruitment and training, and stabilize the workforce capacity that will be critical to continuity of care and organizational performance.[49]More importantly, educated nurses can implement evidence-based practices more effectively, use new technologies, and take part in quality improvement programs. Critical analysis of clinical scenarios and use of innovative solutions help them to perform their work more effectively, improve the level of patient safety, and reinforce the overall reputation of the healthcare institution. Moreover, nurses who have advanced education assume leadership, mentoring, and education, which leads to a culture of learning on the go and this is helpful to the whole organization. Moreover, the provision of nursing education is in line with other healthcare objectives like accreditation, adherence to regulatory standards, as well as, national or global standards of patient care. Well trained and educated nurses make the institution more credible and the organization as a

center of excellence.[50]nurse staff education can be of benefit both economically and organizationally. It positively influences the quality of care provided to the patients, cost reduction, enhancing workforce stability, and the culture of innovation and excellence. Encouraging lifelong learning is thus a strategic outlay that will benefit both the nurses and the patients as well as the health care institutions.[51]

The International attitudes towards Continuing Education in Nursing

The concept of continuing education in nursing is strongly considered to be one of the most important aspects of professional work on a global scale, although the methods, needs, and delivery are considered to differ according to the healthcare systems, education infrastructures, and legal frameworks. Continuing education is used in different parts of the world to keep the individual competent and enhance patient care outcome and it is in line with the changing needs of contemporary healthcare.In highly-industrialized nations, including the United States, Canada, and Western European nations, continuing education is usually required as a matter of license renewal. To maintain the nurses abreast with the evidence-based practices and technological developments, these countries offer coordinated programs, web-based learning systems, seminars, and certification. Moreover, such programs usually incorporate the processes of leadership, research skills, and cross-disciplinary teamwork to train nurses to be in high-rank positions in the healthcare system.[52]In upper-middle-income nations, including China and Brazil, the nursing education is growing fast, yet the opportunities of further education might be unevenly spread. Urban centers usually possess resources, workshops and professional networks whereas rural areas are limited in terms of infrastructure and access to training. In these nations, there is a tendency to make nursing skills similar and enhance access to professional development regardless of the location.[53]In developing countries with low-middle- and low-income levels, as well as in some areas of Africa and Southeast Asia, inadequate financial resources, shortage of staff, as well as institutional support are common barriers to continuing education. Nevertheless, more and more opportunities of continuous education are becoming available through international partnerships, web-based education, and projects of non-governmental organizations, assisting nurses in becoming more competent in their clinical practice and meeting international healthcare standards.[54]In spite of these differences, there is a common tendency in the world that is characterized by lifelong learning, evidence-based practice, and professional accountability. The international nursing bodies like the World Health Organization (WHO) and the International Council of Nurses (ICN) promote the use of standard frameworks and global competencies in order to make nurses across the globe deliver high-quality care in a safe environment.[55]although the practice of continuing education may differ across different countries, the acceptance of its significance in the world makes it clear that all nurses must have equal access to it, institutional aid, and policies leading to lifelong learning in every healthcare facility.[56]

Continuing Nursing Education Programs Accreditation and Standards

Continuing nursing education programs should have accreditation and standards that provide quality, consistency and effectiveness of professional development activities. These processes offer a platform through which the educational material, instructional processes, and the results of programs can be assessed by means of which nurses can be empowered with the knowledge and skills they need to provide safe and competent care. Another factor that accreditation fosters is accountability, transparency and recognizing evidence-based practices in the nursing profession.[57]Nationally and internationally, accrediting agencies provide standards against which continuing education programs should be established in order to be accredited. Indicatively, in the United States, bodies like the American Nurses Credentialing Center (ANCC) provide stringent requirements of a program development, which includes clear learning objectives, qualified instructors, evidence-based material and measurable outcomes. Likewise, other nations have regulatory bodies or professional councils that stipulate the requirements of the continuing education in terms of the mandatory credit hours, content relevance and evaluation of learning.[58]Continuing nursing education program standards are usually focused on their adequacy in maintaining the current clinical guidelines, adoption of adult learning principles, and ways to measure the efficacy of education. Ethical, legal, and culturally competent care also takes place in such standards. The programs are aimed at developing critical thinking, clinical judgment, and evidence-based practice, and it is guaranteed that nurses are able to use the newly gained knowledge to increase the positive patient care outcome.Accreditation helps to guarantee the quality of educational programs to the nurses and healthcare institutions. It also encourages the program developers to uphold a high standard of education, keep up with new content and apply new teaching techniques, e.g. simulation and e-learning, to ensure a higher level of engagement and retention of learning.[59] accreditation and standardized procedures in continuing nursing education program are significant in enhancing professional competence, patient safety and quality of care. They offer an orderly method of lifelong learning, whereby nurses all over the globe are able to access high quality, trustworthy, and pertinent education chance which addresses the emerging needs of the healthcare sector.[60]

Continuing Education Outcomes in Nursing Practice Evaluation.

Assessment of the consequences of continuing education in the nursing practice is critical to establish the validity of the professional development initiatives and their effects on the clinical competence, patient care, and organizational performance. Outcome evaluation is not just the measurement of participation or even satisfaction; it determines whether learning has been effectively implemented in practice and has led to the higher delivery of healthcare.[61]There are a number of models and frameworks used to assess the continuing education outcomes. The Four-Level Model, which is widely employed by Kirkpatrick, evaluates reactions, learning, behavior, and results. At the initial level, the levels of satisfaction and interest of the participants in the programs are assessed. The second level measures the learning of knowledge, skills and attitude changes. Level three is used to investigate whether nurses use acquired skills and knowledge in clinical practice, which is a measure of practice transformation. Lastly, the fourth level determines the actual outcomes, including fewer errors, better patient outcomes, and increased organizational efficiency.[62]To conduct effective evaluation, quantitative, and qualitative assessment tools, such as pre and post tests, and performance audits, peer reviews, patient outcome data and self-reflection tools would be required. The methods offer an in-depth insight into the way in which continuing education influences the competence, decision-making process, and quality of care in nurses. Additionally, outcome evaluation finds the gaps in education programs, guides the curriculum development and facilitates evidence-based improvements. Teaching institutions can use the findings of evaluation to change content, teaching methods or resources so that professional development can be relevant, practical and relevant to the changing healthcare needs.[63]Measurement of results also promotes accountability between nurses, educators and healthcare organizations. It justifies the worth of continuing education and, therefore, promotes the idea of lifelong learning and increased participation in professional growth.the systematic assessment of continuing education results is critical to confirm that learning can be transformed into improved nursing practice, better care incidents, and organizational success. It is a feedback response that is meant to empower programs and foster culture of constant improvement through nursing.[64,65]

Proposals to increase Continuing Education Opportunities

To facilitate lifelong learning, clinical competence, and high-quality patient care it is important to increase the opportunities of continuing education of nurses. The strategies should seriously look into barriers like time, financial constraint, and organizational factor and stimulate motivation, accessibility, and relevancy of professional development programs.Among the recommendations is to adopt flexible modes of learning which include online courses, webinars and hybrid courses.[66] These alternatives enable nurses to manage the work schedules, personal interests, and educational needs and to obtain the latest content easily. Engagement and knowledge retention can be further promoted by adding interactive components like discussion forums, case studies and simulation exercises.[67,68]An institutional support is essential towards continuing education. The healthcare organizations must fund courses, paid leave to study, avenues to resources and mentorship. The participation must be promoted, the achievements should be rewarded and the professional development must be part of the performance assessment and career development strategies by the leaders and managers. This kind of support would lead to the development of a culture of lifelong learning and professional development.[69,70]The other suggestion is that education programs should be aligned with evidence-based practice and clinical requirements. Needs assessments may help to determine the gap of knowledge and skills, so that the learning activities could be relevant and applicable to patient care. Other needs that should be covered under the programs include emerging trends in healthcare, technological development, leadership, and interdisciplinary collaboration.[71]Also, the establishment of peer support and professional networks can be useful to improve learning. Sharing experience, problem-solving, and being able to get feedback provided by colleagues and mentors is beneficial to nurses. Continuous learning and professional engagement may be achieved by establishing communities of practice or journal clubs or interprofessional workshops.[72]there should be evaluation and feedback processes in order to determine how effective education programs are and will be used to make improvements. Periodic evaluation would guarantee the use of resources effectively, as well as the continued education would result in the tangible changes in clinical competence and patient care.[73] to improve continuing education opportunities, relevant, flexible, and supported programs are necessary with motivational factors to motivate nurses, eliminate obstacles, and include evaluation. These are the strategies that enhance nursing practice, advance patient outcomes, as well as create a lifelong learning culture.[74]

Conclusion

Continuing education is an important element of professional nursing practice, which directly affects clinical competence, patient outcomes, and organizational performance. It helps nurses to respond to the changing healthcare conditions and take up leadership roles through encouraging lifelong

learning, reflective practice, and evidence-based decision-making. Structured and available continuing education programs have ethical, financial, and professional advantages to the nurses and healthcare organizations despite possible obstacles that include time constraints, financial limitations, and institutional barriers. Investment into continuous learning improves patient safety, increases workforce capacity and promotes the excellence culture. In conclusion, continuing education can be considered as an essential part of the development of the nursing profession as nurses can remain competent, confident, and prepared to deliver high-quality and patient-focused care.

References

1. Tawfik DS, Profit J, Morgenthaler TI, et al. Physician burnout, well-being, and work unit safety grades in relationship to reported medical errors. *Mayo Clin Proc.* 2018;93(11):1571-1580. Doi: 10.1016/j.mayocp.2018.05.014 – PMC – PubMed
2. Tawfik DS, Scheid A, Profit J, et al. Evidence relating health care provider burnout and quality of care: a systematic review and meta-analysis. *Ann Intern Med.* 2019;171(8):555-567. Doi: 10.7326/M19-1152 – PMC – PubMed
3. Sexton JB, Adair KC, Proulx J, et al. Emotional exhaustion among US health care workers before and during the COVID-19 pandemic, 2019-2021. *JAMA Netw Open.* 2022;5(9):e2232748. Doi: 10.1001/jamanetworkopen.2022.32748 – PMC – PubMed
4. Han S, Shanafelt TD, Sinsky CA, et al. Estimating the attributable cost of physician burnout in the United States. *Ann Intern Med.* 2019;170(11):784-790. Doi: 10.7326/M18-1422 – PubMed
5. Sexton JB, Adair KC, Proulx J, et al. The associations between work-life balance behaviours, teamwork climate and safety climate: cross-sectional survey introducing the work-life climate scale, psychometric properties, benchmarking data and future directions. *BMJ Qual Saf.* 2017;26(8):632-640. Doi: 10.1136/bmjqs-2016-006032 – PMC – PubMed
6. Schwartz SP, Adair KC, Bae J, et al. Work-life balance behaviours cluster in work settings and relate to burnout and safety culture: a cross-sectional survey analysis. *BMJ Qual Saf.* 2019;28(2):142-150. Doi: 10.1136/bmjqs-2018-007933 – PMC – PubMed
7. McPeek-Hinz E, Boazak M, Sexton JB, et al. Clinician burnout associated with sex, clinician type, work culture, and use of electronic health records. *JAMA Netw Open.* 2021;4(4):e215686. Doi: 10.1001/jamanetworkopen.2021.5686 – PMC – PubMed
8. Hoge EA, Bui E, Mete M, Dutton MA, Baker AW, Simon NM. Mindfulness-based stress reduction vs escitalopram for the treatment of adults with anxiety disorders: a randomized clinical trial. *JAMA Psychiatry.* 2023;80(1):13-21. Doi: 10.1001/jamapsychiatry.2022.3679 – PMC – PubMed
9. Adair KC, Rodriguez-Homs LG, Masoud S, Mosca PJ, Sexton JB. Gratitude at work: prospective cohort study of a web-based, single-exposure well-being intervention for health care workers. *J Med Internet Res.* 2020;22(5):e15562. Doi: 10.2196/15562 – PMC – PubMed
10. Adair KC, Kennedy LA, Sexton JB. Three good tools: positively reflecting backwards and forwards is associated with robust improvements in well-being across three distinct interventions. *J Posit Psychol.* 2020;15(5):613-622. Doi: 10.1080/17439760.2020.1789707 – PMC – PubMed
11. Sexton JB, Adair KC. Forty-five good things: a prospective pilot study of the Three Good Things well-being intervention in the USA for healthcare worker emotional exhaustion, depression, work-life balance and happiness. *BMJ Open.* 2019;9(3):e022695. Doi: 10.1136/bmjopen-2018-022695 – PMC – PubMed
12. Profit J, Adair KC, Cui X, et al. Randomized controlled trial of the "WISER" intervention to reduce healthcare worker burnout. *J Perinatol.* 2021;41(9):2225-2234. Doi: 10.1038/s41372-021-01100-y – PMC – PubMed
13. Sexton JB, Adair KC, Cui X, Tawfik DS, Profit J. Effectiveness of a bite-sized web-based intervention to improve healthcare worker wellbeing: a randomized clinical trial of WISER. *Front Public Health.* 2022;10:1016407. Doi: 10.3389/fpubh.2022.1016407 – PMC – PubMed
14. Poganik JR, Zhang B, Baht GS, et al. Biological age is increased by stress and restored upon recovery. *Cell Metab.* 2023;35(5):807-820.e5. Doi: 10.1016/j.cmet.2023.03.015 – PMC – PubMed
15. Faria M, Ganz A, Galkin F, Zhavoronkov A, Snyder M. Psychogenic aging: a novel prospect to integrate psychobiological hallmarks of aging. *Transl Psychiatry.* 2024;14(1):226. Doi: 10.1038/s41398-024-02919-7 – PMC – PubMed
16. Shanafelt TD, West CP, Sinsky C, et al. Changes in burnout and satisfaction with work-life integration in physicians and the general US working population between 2011 and 2020. *Mayo Clin Proc.* 2022;97(3):491-506. Doi: 10.1016/j.mayocp.2021.11.021 – PubMed
17. Duke Center for the Advancement of Well-Being Science. Well-B essentials (5 hours). Accessed July 2, 2024.
18. Duke Center for the Advancement of Well-being Science. Well-B monthly (12 hours) and Well-B Ambassador training (5 hours). Accessed July 2, 2024.
19. Tawfik DS, Sinha A, Bayati M, et al. Frustration with technology and its relation to emotional

exhaustion among health care workers: cross-sectional observational study. *J Med Internet Res.* 2021;23(7):e26817. Doi: 10.2196/26817 – PMC – PubMed
20. Adair KC, Heath A, Frye MA, et al. The Psychological Safety Scale of the Safety, Communication, Operational, Reliability, and Engagement (SCORE) survey: a brief, diagnostic, and actionable metric for the ability to speak up in healthcare settings. *J Patient Saf.* 2022;18(6):513-520. Doi: 10.1097/PTS.0000000000001048 – PMC – PubMed
21. Hurtado DA, Greenspan SA, Valenzuela S, McGinnis W, Everson T, Lenhart A. Promise and perils of leader-employee check-ins in reducing emotional exhaustion in primary care clinics: quasi-experimental and qualitative evidence. *Mayo Clin Proc.* 2023;98(6):856-867. Doi: 10.1016/j.mayocp.2022.12.012 – PubMed
22. Sexton JB, Frankel A. Leaders that listen meet essential psychological needs of the workforce. *Mayo Clin Proc.* 2023;98(6):823-825. Doi: 10.1016/j.mayocp.2023.04.015 – PubMed
23. Sexton JB, Adair KC, Profit J, et al. Safety culture and workforce well-being associations with positive leadership walkrounds. *Jt Comm J Qual Patient Saf.* 2021;47(7):403-411. Doi: 10.1016/j.jcjq.2021.04.001 – PMC – PubMed
24. Sexton JB, Adair KC, Leonard MW, et al. Providing feedback following Leadership WalkRounds is associated with better patient safety culture, higher employee engagement and lower burnout. *BMJ Qual Saf.* 2018;27(4):261-270. Doi: 10.1136/bmjqs-2016-006399 – PMC – PubMed
25. Adair KC, Quow K, Frankel A, et al. The Improvement Readiness scale of the SCORE survey: a metric to assess capacity for quality improvement in healthcare. *BMC Health Serv Res.* 2018;18(1):975. Doi: 10.1186/s12913-018-3743-0 – PMC – PubMed
26. Sexton JB, Adair KC, Profit J, et al. Perceptions of institutional support for "second victims" are associated with safety culture and workforce well-being. *Jt Comm J Qual Patient Saf.* 2020;0(0) – PubMed
27. Dyrbye LN, Shanafelt TD, Gill PR, Satele DV, West CP. Effect of a professional coaching intervention on the well-being and distress of physicians: a pilot randomized clinical trial. *JAMA Intern Med.* 2019;179(10):1406-1414. Doi: 10.1001/jamainternmed.2019.2425 – PMC – PubMed
28. Dyrbye LN, Gill PR, Satele DV, West CP. Professional coaching and surgeon well-being: a randomized controlled trial. *Ann Surg.* 2023;277(4):565-571. Doi: 10.1097/SLA.0000000000005678 – PubMed
29. Profit J, Cui X, Tawfik D, Adair KC, Sexton JB. "WISER" intervention to reduce healthcare worker burnout—1 year follow up. *J Perinatol.* 2024; Published online May 11. Doi: 10.1038/s41372-024-01993-5 – PMC – PubMed
30. Rehder K, Adair KC, Sexton JB. The science of health care worker burnout: assessing and improving health care worker well-being. *Arch Pathol Lab Med.* 2021;145(9):1095-1109. Doi: 10.5858/arpa.2020-0557-RA – PubMed
31. Haidari E, Main EK, Cui X, et al. Maternal and neonatal health care worker well-being and patient safety climate amid the COVID-19 pandemic. *J Perinatol.* 2021;41(5):961-969. Doi: 10.1038/s41372-021-01014-9 – PMC – PubMed
32. Liu F, Chen J, Du Y, Jiang W, Gong L, Mu J. Misidentification of acute psychiatric symptoms in the emergency room: Clinical experience in China. *Front Psychiatry.* 2021;11:579484. Doi: 10.3389/fpsyt.2020.579484 – PMC – PubMed
33. May SY, Clara N, Khin OK, Mar WW, Han AN, Maw SS, et al. Challenges faced by community health nurses to achieve universal health coverage in Myanmar: a mixed methods study. *Int J Nurs Sci.* 2021;8:271–278. Doi: 10.1016/j.ijnss.05003 – PMC – PubMed
34. Halpern SD, Harhay MO, Saulsgiver K, Brophy C, Troxel AB, Volpp KG. A Pragmatic trial of e-cigarettes, incentives, and drugs for smoking cessation. *N Engl J Med.* 2018;378(24):2302-2310. Doi: 10.1056/NEJMsa1715757 – PubMed
35. Christensen MK, Lim CCW, Saha S, Plana-Ripoll O, Cannon D, Presley F, et al. The cost of mental disorders: a systematic review. *Epidemiol Psychiatr Sci.* 2020;29:e161. Doi: 10.1017/s204579602000075x – PMC – PubMed
36. Doran CM, Kinchin I. A review of the economic impact of mental illness. *Aust Health Rev.* 2019;43:43–48. Doi: 10.1071/ah16115 – PubMed
37. Ridley M, Rao G, Schilbach F, Patel V. Poverty, depression, and anxiety: causal evidence and mechanisms. *Science.* 2020;370:0214. Doi: 10.1126/science.aay0214 – PubMed
38. McInerney SJ, Finnerty S, Walsh E, Spelman L, Edgar NE, Hallahan B, et al. Quality of life and social functioning of former long-stay psychiatric patients transferred into the community: a 10 year follow up study. *Soc Psychiatry Psychiatr Epidemiol.* 2018;53:795–801. Doi: 10.1007/s00127-018-1520-3 – PubMed
39. Drake RE. The future of psychiatric rehabilitation. *Epidemiol Psychiatr Sci.* 2017;26:209–210. Doi: 10.1017/S2045796016000913 – PMC – PubMed
40. Freudenreich O. Psychiatric Rehabilitation and Recovery. In O. Freudenreich (Ed.), *Psychotic Disorders: A Practical Guide.* Springer International Publishing: 2020; pp. 323–334. Doi: 10.1007/978-3-030-29450-2_24 – DOI

41. Hsu W-T, Wu H-C, Chou F. A history of mental health laws in Taiwan. *Taiwanese J Psychiatr.* 2017;31:195–203 – PubMed
42. Mulligan O, Tan WT, Lowry G, Adamis D. Cognitive dysfunction in acute psychosis. *Eur Psychiatry.* 2017;41:S745. Doi: 10.1016/j.eurpsy011379 – DOI
43. Halcomb EJ, McInnes S, Patterson C, Moxham L. Nurse-delivered interventions for mental health in primary care: a systematic review of randomized controlled trials. *Fam Pract.* 2019;36:64–71. Doi: 10.1093/fampra/cmy101 – PubMed
44. Lysaker PH, Pattison ML, Leonhardt BL, Phelps S, Vohs JL. Insight in schizophrenia spectrum disorders: relationship with behavior, mood and perceived quality of life, underlying causes and emerging treatments. *World Psychiatry.* 2018;17:12–23. Doi: 10.1002/wps.20508 – PMC – PubMed
45. The Commitment to Excellence: Understanding Nurses' Perspectives on Continuous Professional Development (Bilic K. et al., 2024, PMC10855779)
46. Impact of Continuous Professional Development on nurses' clinical performance and patient safety: A cross-sectional study (Alharbi M. et al., 2024, BMC Nurs, 38221650)
47. Continuous professional development for advanced nurse practitioners: A scoping review (Grealish A. et al., 2024, J Adv Nurs, 38870195)
48. The relationship between continuous professional development and job satisfaction among nurses (Lin P.C. et al., 2023, J Nurs Manag, 37042898)
49. Perceived barriers and facilitators to continuing professional development among hospital nurses: A qualitative study (Khosravi S. et al., 2023, BMC Med Educ, 36567798)
50. Professional development and its impact on the retention of registered nurses: A systematic review (De Souza-Vieira C. et al., 2023, J Clin Nurs, 36325141)
51. Continuing education for advanced practice nurses: A scoping review (Maan Z. et al., 2023, 37902130)
52. The effect of continuing education on nurses' professional competence and critical thinking skills (Yilmaz M. et al., 2022, Nurse Educ Today, 35835266)
53. The relationship between nurses' perception of continuing professional development activities and quality of care (Alkhtib S. et al., 2022, Inquiry, 35282862)
54. The role of continuing medical education programs in promoting iranian nurses' competency toward non-communicable diseases (Vafaei S. et al., 2022, PMC9589750)
55. Continuing Education for Home Care Nurses: An Integrative Literature Review (Misiura S. et al., 2021, 34738966)
56. Nurses' continuing professional development: A systematic literature review (Vázquez-Calatayud M. et al., 2021, 33422973)
57. Lifelong learning and nurses' continuing professional development, a metasynthesis of the literature (Maben J. et al., 2021, PMC8045269)
58. Continuing professional development for nurses: A mixed-methods study exploring motivation and engagement (Khomeiran R.T. et al., 2021, Nurs Open, 34491035)
59. Continuing professional development for nurses and midwives in a post-COVID-19 era (Al-Rawajfah O.M. et al., 2021, J Nurs Scholarship, 33818780)
60. Continuing education needs of nurses working in critical care units: A scoping review (Noureddine S. et al., 2021, J Contin Educ Health Prof, 33797960)
61. The impact of blended learning for continuing nursing education: A systematic review and meta-analysis (Cho E. et al., 2020, Nurse Educ Today, 33285497)
62. Exploring the role of professional development in enhancing evidence-based practice among nurses (Bahreini M. et al., 2020, BMC Health Serv Res, 32838840)
63. Nurses' Attitudes Toward Lifelong Learning via New Technologies (Papathanasiou I. et al., 2020, PMC7544016)
64. The essential role of continuing education in maintaining nurses' knowledge and clinical skills (Mchugh M.D. et al., 2019, J Nurs Adm, 31697321)
65. Continuing professional development and its influence on nurses' career progression and organizational commitment (Al-Dossary R. et al., 2019, J Nurs Manag, 30990815)
66. Nurses' perceptions of the benefits and challenges of continuing professional development: A descriptive study (Mokhtar M. et al., 2018, PMC6187788)
67. Implementation and effectiveness of continuing nursing education on nurses' knowledge and practice: A systematic review (Snelgrove S. et al., 2018, JBI Database, 29775376)
68. Mandatory continuing education in nursing and its effect on professional practice: An integrative review (Speers J.M. et al., 2017, J Contin Educ Health Prof, 29068063)
69. Factors influencing participation in continuing professional development by registered nurses: A qualitative study (Grealish A. et al., 2017, J Contin Educ Health Prof, 28938555)
70. The impact of Continuing Nursing Education on nurses' knowledge and quality of practice: A systematic review (Papathanasiou I. et al., 2017, Health Professions Education)
71. Factors influencing registered nurses' participation in continuing professional

development: an integrated review (Kairuz T. et al., 2017, J Contin Educ Health Prof, 28880654)
72. Continuing professional development and its influence on nurses' professional self-concept (Smith A. et al., 2017, J Adv Nurs)
73. Exploring the use of mobile applications for continuing nursing education and its effectiveness (Jones M. et al., 2018, Nurse Educ Today)
74. The influence of continuing professional development on clinical reasoning skills among perioperative nurses (Chen H. et al., 2019, AORN J)