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Evaluating Nurses' Perceptions Toward Lifelong Learning And Its Impact On Patient Care

Jerelyn Jean Dongallo, Sarah Saad Alqahtani, Aine Mairead McGahern, Fatimah AbdulRazak Futa, Marcia Alexandra Martins, Cossor Jabeen Anwar, and Nasteho Abdille

Abstract

Background: Lifelong learning is a qualitative indicator in nursing, enhancing nurses' capacity and skills to meet healthcare demands and improve patient outcomes.

Objective: This study aimed to assess nurses' perceptions of lifelong learning and examine its impact on clinical practice and patient care at King Abdullah bin Abdulaziz University Hospital in Riyadh, Saudi Arabia.

Methods: A cross-sectional study was conducted between July and September 2025. The sample of the study consisted of 495 nurses. Data were collected through an electronic questionnaire adapted from the Q-PDN and relevant literature. SPSS 23 statistical software platform was used for statistical analysis.

Results: Nurses demonstrated strong positive perceptions of lifelong learning (overall mean = 4.24 ± 0.96) and high motivation to participate in these activities (mean = 4.18 ± 0.93), especially when supported by colleagues and management. Workshops and in-hospital training were described as the most effective learning tools (mean = 4.44 ± 0.85). Key barriers included incompatibility of educational content, workload, and time constraints. Regression analysis showed a significant positive relationship between lifelong learning and patient care (β = 0.684, R² = 0.226, p < 0.001).

Conclusion: Nurses value the importance of lifelong learning, its importance in enhancing their clinical skills and keeping up with scientific studies and modern nursing care methods, which positively impacts patient care.

Keywords: Lifelong learning, nursing, patient care, Saudi Arabia, Vision 2030.

Introduction

1. Background

Lifelong learning programs are an important area that supports the advancement of organizations and individuals, especially in modern healthcare. In nursing, the rapid development of healthcare systems has led to the recognition of lifelong learning as a vital and effective component of the nursing profession and continuing professional development (Mlambo, Silén, & McGrath, 2021).

Lifelong learning programs ensure the provision of all necessary resources for lifelong learning, indicating that it is a self-contained, ongoing process aimed at acquiring skills and keeping up with scientific developments and knowledge throughout nurses' careers through diverse formal and informal learning activities that contribute to enhancing their personal and professional development and their ability to provide high-quality, evidence-based care to patients (Vázquez-Calatayud et al.,201; Shiri et al., 2023; Simkhada et al., 2023) . In addition, the frequent developments and changes in patient care and health service delivery, patient needs, modern technology, and advances in knowledge, methods, and procedures require lifelong nursing education (Lera et al., 2020).

Lifelong learning also enables nurses to keep up with the latest medical innovations, improve their clinical assessment skills, and adapt to new healthcare protocols. Furthermore, it enables them to ensure

safe and effective patient care through several essential elements, including critical thinking, enhanced self-confidence, and the ability to make ethical decisions (Lera et al., 2020 & Wakefield et al., 2021).

Numerous studies have highlighted the importance of continuing professional development for healthcare workers, particularly nurses (Price & Reichert, 2017 & Kurtović et al., 2024). However, nurses' understanding of lifelong learning and its role in patient care remains limited. Nurses' perceptions and attitudes toward lifelong learning vary depending on several factors, including the availability of learning opportunities, organizational culture, access to resources, personal motivation and development pathways, supportive leadership, and recognition systems. These factors play a critical role in nursing commitment to and engagement in lifelong learning (Mlambo, Silén, & McGrath, 2021; Shiri et al, 2023 & Lera et al., 2020).

The interplay between lifelong learning and nursing competency is evident in how lifelong learning directly impacts the quality of nursing practice and patient outcomes (Qalehsari, Khaghanizadeh, & Ebadi, 2017). The dynamic nature of the healthcare sector requires continuous updating of skills and knowledge, and lifelong learning helps bridge the gap between evolving healthcare demands and nurses' ability to effectively meet these challenges (Qalehsari, Khaghanizadeh, & Ebadi, 2017; Kurtović et al., 2024).

The impact of lifelong learning extends beyond nurses' professional development. Studies indicate that it improves patient outcomes, enhances organizational performance, and fosters a culture of continuous quality improvement in healthcare (Endalamaw et al., 2024; Mannion& Davies, 2018). Therefore, understanding how nurses perceive lifelong learning and the factors that influence their engagement is essential to building a healthcare environment that aligns with patient needs (Mlambo, Silén, & McGrath, 2021; Lera et al., 2020).

Therefore, this study aims to assess nurses' perceptions of lifelong learning and examine how these perceptions influence their clinical practice, and the quality of care provided to patients.

2. Material and Methods

2.1. Study Design:

This is a cross-sectional study design to assess nurses' perceptions of lifelong learning and examine how these perceptions influence their clinical practice, as well as the quality of care provided to patients. The study was conducted between July and September 2025. The study was conducted Among the nurses at King Abdullah bin Abdulaziz University Hospital in Riyadh, Saudi Arabia.

2.2. Study participants:

The study encompassed a cohort of 495 nurses from King Abdullah bin Abdulaziz University Hospital, Saudi Arabia. These participants were selected from various hospital nursing backgrounds to provide a diverse and comprehensive understanding of the topic.

2.3. Inclusion criteria:

Nurses working at King Abdullah bin Abdulaziz University Hospital; nurses working during the data collection period; and nurses who voluntarily agreed to participate in the study.

2.4. Exclusion Criteria:

The Exclusion Criteria included all non-nursing health professionals.

2.5. Procedure

The study was conducted at King Abdullah bin Abdulaziz University Hospital, with the participation of nurses from various departments. An electronic questionnaire was designed to collect data, and to ensure the confidentiality and integrity of participants' responses, it was distributed anonymously via an internal link within the hospital. This method was chosen to efficiently reach a wide range of nurses

within the hospital, ensuring a diversity of perspectives and experiences, as well as to facilitate easy participation without compromising the integrity of the study results. This approach facilitated broad participation and facilitated data collection within the hospital.

2.6. Questionnaire

The questionnaire consists of five parts to assess nurses' perceptions of lifelong learning and examine how these perceptions influence their clinical practice and the quality of care provided to patients. The questionnaire was designed based on the Questionnaire for Professional Development for Nurses (Q-PDN) (Brekelmans et al., 2015) and a study by (Lera et al., 2020). The questionnaire was presented in its preliminary form to a panel of nursing professionals to ensure cultural appropriateness and applicability in the Saudi nursing context. The reliability of the study instrument was verified using Cronbach's alpha, which indicated a high level of internal consistency ($\alpha = 0.93$). The questionnaire was designed to assess nurses' participation in continuing education activities and the impact on patient care. Responses were quantified using a Likert scale.

2.7. Data Analysis

Statistical analysis was carried out using the Statistical Package for the Social Sciences (SPSS Inc., Chicago, IL, USA), version 26. Frequency and percentages were obtained for the categorical variables, while mean and standard deviation (SD) were calculated for the scale variables. The normality of the distribution of responses was assessed using the Kolmogorov–Smirnov test. The ANOVA test was employed to examine differences in attitudes towards participation for Lifelong Learning , as well as in relation to Impact on Patient Care.

2.8. Ethical Considerations:

Ethical approval obtained from the Institutional Review Board (IRB) at King Abdullah Bin Abdulaziz University Hospital, Riyadh, KSA. Registration Number with KACST, KSA: (HA-01-R-104) was issued approval - IRB Log No 25-0111. All participants provided informed consent, which ensured the privacy and confidentiality of their data.

3. Results

A total of 495 questionnaires were completed. The demographic and baseline characteristics of the participants are presented in Table 1.

Table 1. Demographic characteristics of the participants (n=495)

Characteristics	Frequency	Percent (%)
Gender		
Male	47	9.5%
Female	448	90.5%
Nationality		
Saudi	140	28.3%
Non-Saudi	355	71.7%
Age		
20-24 years	131	26.5%
25-29 years	170	34.3%
30-34 years	95	19.2%
35-39 years	80	16.2%

More than 40 year	19	3.8%
Marital status		
Single	287	%58.0
Married	208	%42.0
Educational level		
Diploma	63	%12.7
Bachelor	254	%51.3
Master's degree	161	%32.5
PHD	17	%3.4
Years of experience:		
Less than 5 year	152	30.7%
5-9 years	80	16.2%
10-14 year	115	23.2%
15-20 years	116	23.4%
More than 20 year	32	6.5%
Do you work extra hours?		
Yes	201	40.6%
No	294	59.4%

The majority were females (90.5%), and males (9.5%). Among the participants (28.3%) Saudi and (71.7%) non-Saudi. Married (58.0%) Single and (42.0%) Married . The mean age of participants was 28.8 years (SD = 5.73), and the mean years of work experience was 10.21 years (SD = 6.49). Among the participants (40.6%) works extra hours. The educational level of approximately (51.3%) of participants had bachelor's degree, (32.5%) had a master's degree, (12.7%) had Diploma degree, and (3.4%) had PHD degree.

Table 2. Mean, Standard Deviation, and Chi-Square for Nurses' perceptions and attitudes toward lifelong learning

	Statements	Mean	Std. Deviation	Chi-Square	p-value
1	I believe in the importance of lifelong learning to develop my professional skills.	4.44	0.82	404.51	
2	I believe that continuous learning helps me improve the quality of patient care.	4.30	0.89	305.63	
3	I believe that lifelong learning is an integral part of my career.	4.24	0.95	274.66	
4	I enjoy a professional environment and supportive leadership that encourages lifelong learning.	4.17	1.04	251.22	
5	Modern technologies contribute to providing better opportunities for lifelong learning.	4.32	0.93	334.66	
6	Lifelong learning enhances my confidence in my work as a nurse.	4.06	1.11	200.71	
7	Do you think the education you received to obtain your basic certification is sufficient for your career?	4.24	1.05	307.72	

8	Do you think your professional knowledge is sufficient to perform your duties?	4.29	0.96	316.96
9	Do you believe that professional knowledge should be enriched and renewed?	4.11	1.06	218.41
	Average	**4.24**	**0.96**	

Table (2) shows the average of the statements on Nurses' perceptions and attitudes toward lifelong learning (4.24). This indicates that nurses have a high level of attitudes and perceptions about the importance of lifelong learning. The highest means (4.44 ± 0.82) was recorded for the statement "I believe in the importance of lifelong learning to develop my professional skills." The statistical significance level for the chi-square coefficient was 0.000, which is less than 0.05, indicating differences in favor of the "strongly agree" response, reflecting nurses' perceptions of the importance of lifelong learning. In addition, the results indicate that nurses are aware of the importance of lifelong learning in improving the quality of patient care, with mean of (4.30 ± 0.89), and patients' perceptions of the role of modern technology in lifelong learning (4.32 ± 0.93). In general, nurses demonstrated high agreement regarding perceptions and attitudes toward lifelong learning and its importance in improving patient care.

Table 3. Mean, Standard Deviation, and Chi-Square for Nurses' Motivations in Lifelong Learning

	Statements	Mean	Std. Deviation	Chi-Square	p-value
1	I am interested in participating in lifelong learning programs to keep up with the latest technological developments and medical protocols.	4.16	1.08	261.04	
2	I am interested in participating in lifelong learning programs to improve my technical and professional skills.	4.26	0.91	288.41	
3	I am interested in participating in lifelong learning programs to seek career advancement opportunities.	4.31	0.89	314.30	
4	I am interested in participating in lifelong learning programs to improve the quality of care provided to patients.	4.18	1.05	258.62	
5	I usually receive support from colleagues and managers to participate in lifelong learning.	4.34	0.90	341.31	
6	I believe that lifelong learning enhances my ability to adapt to rapid medical changes.	4.16	1.05	247.93	
7	I believe that lifelong learning contributes to improved patient outcomes.	3.72	0.93	116.87	
	Average	**4.18**	**0.93**		

Table (3) shows the average of the statements on Nurses' Motivations in Lifelong Learning (4.18). This confirms nurses' keenness to develop their skills and knowledge, in addition to the hospital administration's encouragement to develop nurses' skills to advance the health sector within Vision 2030. The highest means (4.34 ± 0.9) was recorded for the statement "I usually receive support from colleagues and managers to participate in lifelong learning" The statistical significance level for the chi-square coefficient was 0.000, which is less than 0.05, indicating differences in favor of the "strongly agree" response, reflecting the hospital administration's approach to promoting a culture of lifelong learning among nurses.
In addition, the results indicate that nurses are aware of the importance of lifelong learning in career advancement opportunities, with mean of (4.31 ± 0.89), and improve my technical and professional skills in lifelong learning (4.26 ± 0.91).

Table 4. Mean, Standard Deviation, and Chi-Square for Nurses' Tools and Resources Approved for Lifelong Learning

	Statements	Mean	Std. Deviation	Chi-Square	p-value
1	I use electronic resources (such as online courses and educational videos) for lifelong learning.	3.75	1.46	149.05	
2	Workshops and training courses within the workplace contribute to improving my skills.	4.44	0.85	424.51	
3	I have the ability to use modern technology to access learning resources.	4.23	0.96	274.45	
4	The resources available at the institution are sufficient to support me in lifelong learning.	3.88	1.36	171.67	
5	E-learning helps me manage my time better.	3.87	1.36	164.69	
	Average	**3.88**	**1.36**		

Table (4) shows the average of the statements on Nurses' Tools and Resources Approved for Lifelong Learning (3.88). The highest means (4.44 ± 0.85) was recorded for the statement "Workshops and training courses within the workplace contribute to improving my skills" The statistical significance level for the chi-square coefficient was 0.000, which is less than 0.05, indicating differences in favor of the " agree" response, reflecting the effectiveness of workshops and periodic training courses within the hospital to develop nurses' skills.

The results also indicate moderate agreement regarding the role of E-learning in improving time management (3.87 ± 1.36) and the adequacy of institutional resources (3.88 ± 1.36). The use of online courses has the lowest mean score (3.75 ± 1.46), indicating that despite the availability of technology skills, actual interaction with electronic materials may be less frequent.

Table 5. Mean, Standard Deviation, and Chi-Square for Nurses' Challenges and Barriers Facing Lifelong Learning

	Statements	Mean	Std. Deviation	Chi-Square	p-value
1	My workload and time constraints affect my participation in lifelong learning.	4.33	0.98	352.07	
2	Lack of adequate support from management negatively impacts my desire for lifelong learning.	4.24	0.92	270.13	
3	Lack of financial resources hinders my participation in lifelong learning programs.	4.08	1.10	209.86	
4	I find some learning content inappropriate for my daily work needs.	4.34	0.86	337.66	
5	I have difficulty using some technical tools related to online learning.	4.17	1.06	257.69	
	The Average	**4.32**	**0.88**		

Table (5) shows the average of the statements on Nurses' Challenges and Barriers Facing Lifelong Learning (4.32). The highest means (4.34 ± 0.86) was recorded for the statement "I find some learning content inappropriate for my daily work needs" The statistical significance level for the chi-square coefficient was 0.000, which is less than 0.05, indicating differences in favor of the " strongly agree" response. This reflects the importance of adapting educational content for nurses working in various departments within the hospital to achieve efficiency and effectiveness and positively impact patient

outcomes. The results also indicate agreement regarding the Workload and time constraints, a major Challenges in in lifelong learning (4.33 ± 0.98) and the Lack of adequate support (4.24 ± 0.92).

Relationship between Lifelong Learning and Patient Care.

There is a statistically significant effect at the level of significance (0.05) to lifelong learning on patient care at King Abdullah bin Abdulaziz University Hospital.

Table 6. simple linear regression between Lifelong Learning and Patient Care

Model	β	t	Sig.	F	p-value	R	R-Square
(Constant)	14.953	10.179	.000	95.808	0.000	75.4	6.22
Lifelong Learning	.684	9.788	.000				

Dependent Variable: Patient Care.

Table (5) shows the simple linear regression between the Lifelong Learning and Patient Care. The statistical significance level for the F-test was (0.000), which is less than (0.05) which mean that there is a statistically significant effect at the level of significance (0.05) on Lifelong Learning and Patient Care in King Abdullah bin Abdulaziz University Hospital. The table also shows that R-Square was (0.475). This means that the Lifelong Learning contributes to the Patient Care by 47.5%. in addition, the increase in the Lifelong Learning by one unit leads to an increase in the Patient Care by (.0684).

4. Discussion

The study aimed to assess nurses' perceptions of lifelong learning and examine how these perceptions influence their clinical practice and the quality of care provided to patients. Results indicated that nurses at King Abdullah bin Abdulaziz University Hospital had a high level of positive perceptions and attitudes toward lifelong learning, with an overall mean score of 4.24. This reflects nurses' positive attitudes and perceptions of the importance of lifelong learning for professional development and improved patient care. A systematic review of the literature on nurses' lifelong learning and its impact on patient care emphasizes its importance for nurses' professional development and enhancing professional competence. The review also indicates that nurses' lifelong learning needs vary, influenced by factors such as age and position (Alsharari et al., 2025; Qalehsari et al., 2017).

The results of the questionnaire analysis indicate that the majority of participants strongly agreed with the importance of lifelong learning for developing professional skills and its effective role in improving patient care. This indicates that nurses recognize the importance of lifelong learning in nursing practice. The results of the current study are consistent with previous literature, which emphasizes that lifelong learning plays an important role in enhancing nursing practice and improving patient care (Mlambo et al., 2021; Vazquez-Calatayud et al., 2021; Sherry et al., 2023; Kurtovic et al., 2024). Furthermore, nurses' positive perceptions of lifelong learning align with the Kingdom of Saudi Arabia's goal of advancing the health sector within the framework of Saudi Vision 2030 (Alluhidan et al., 2020).

The study also reveals that nurses have a high level of agreement regarding their motivations for participating in lifelong learning, particularly regarding support from colleagues and managers. This is confirmed by the literature, which highlights the importance of supportive leadership and organizational culture within the hospital in motivating nurses to embrace lifelong learning (Sherry et al., 2023; Manion and Davies, 2018; Mlambo et al., 2021). Al- Alluhidan et al. (2020) also emphasize the role of lifelong learning and postgraduate learning pathways in improving healthcare quality and developing staff skills in Saudi Arabia. In addition, the study results are consistent with the findings of Rouleau et al. (2019) regarding the effectiveness of in-hospital workshops and training courses over E-learning in promoting lifelong learning and skill development, which positively impacts patient care. Most nurses preferred practical learning methods within the hospital.

However, nurses at King Abdullah bin Abdulaziz University face several barriers to lifelong learning. The study results indicate that the most significant barriers were the mismatch between educational content and daily work needs, work pressure, and limited time available for lifelong learning. This is confirmed by previous literature on a global scale, where time pressures, limited resources, and the relevance of content are frequent obstacles to participation in lifelong learning (Mlambo et al., 2021;

Sherry et al., 2023). Alluhidan et al. (2020) and AlSadah et al. (2025) also confirmed that the barriers to lifelong learning in the Saudi context are workload and limited financial incentives. The study results also reveal a statistically significant positive relationship between lifelong learning and patient care, with a regression coefficient of $\beta = 0.684$ and $R^2 = 0.226$. This is consistent with previous literature demonstrating that lifelong learning enhances nursing skills and improves patient care (Vázquez-Calatayud et al., 2021; Al-Omary et al., 2024). Therefore, the findings of the current study emphasize the importance of implementing educational programs and pathways aimed at integrating nurses into and embracing lifelong learning, and its association with clinical performance indicators and improved patient care.

Overall, the findings confirm the awareness and motivation of nurses at King Abdullah bin Abdulaziz University for lifelong learning. However, workloads, time constraints, and the alignment of educational content remain barriers and constraints to improving patient care through the adoption of lifelong learning approaches. These findings underscore the need for targeted interventions that include allocating sufficient time for nurses, adopting hybrid learning models that combine face-to-face and e-learning, and tailoring training content to specific clinical contexts to overcome the barriers they face in adopting lifelong learning, which will positively impact patient outcomes.

5. Conclusion

The study results confirm the positive attitudes and perceptions of nurses at King Abdullah bin Abdulaziz University Hospital regarding lifelong learning, its importance, and its impact on improving patient care. In-hospital workshops and training courses, along with organizational support, contribute to enhancing their motivation for lifelong learning. However, workload, time constraints, and the mismatch between educational content and daily clinical needs are among the most significant barriers to their participation in lifelong learning. Therefore, the study results emphasize the importance of developing plans and strategies that integrate lifelong learning into nursing practice, adopting them primarily within hospitals in the Kingdom of Saudi Arabia. This requires allocating time for nurses to participate in lifelong learning activities, designing hybrid learning models that combine e-learning and face-to-face learning, and adapting training content to the needs and nature of nursing work. This enhances nurses' competencies, improves patient outcomes, and achieves the goals of Vision 2030 to advance the health sector and improve the quality of healthcare in the Kingdom of Saudi Arabia.

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