

Scientific Article Entitled: The Impact of In-Service Training and Education on The Efficiency of Health Personnel's Performance in The Government Health Sector in The Kingdom Of Saudi Arabia

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Abstract

Saudi Arabia is presently undergoing a period of development. The Saudi healthcare system is under tremendous pressure to deliver better healthcare services to the country's burgeoning senior population as well as its fast expanding population. Two important issues that policymakers should take into account and address are the shortage of qualified healthcare professionals and the disproportionate reliance on foreign labor. Reexamining healthcare Human Resource Development (HRD) programs is crucial in order to ensure that there is a large pool of healthcare workers who possess the necessary education and skills.

Key words: *in-service training, education, health personnel's performance, government health sector, Kingdom of Saudi Arabia..*

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Introduction

The Kingdom of Saudi Arabia (KSA) has seen significant increases in life expectancy, population growth, and the incidence of infectious diseases and lifestyle diseases like cardiovascular disease over the past few decades. These factors have raised demand for medical services and increased health spending. Given the high health expenditure in KSA in comparison to other high-income nations, healthcare statistics and studies undertaken in the country revealed significantly poorer service availability, indicating inefficiencies in the delivery of health care. Most countries in the world, including the Kingdom of Saudi Arabia, now have an obligation to create an efficient, equitable, and effective healthcare system due to rising healthcare costs and increased demand for healthcare services (Varabyova & Müller, 2016).

The yearly loss of healthcare resources as a result of hospital-related inefficiencies was estimated to be \$300 billion. Hospital efficiency is essential to the overall effectiveness of healthcare systems because they are the primary users of healthcare resources. In order to implement the required laws and practices for guaranteeing the efficient use of public resources, governments must perform an efficiency analysis of their healthcare sectors and pinpoint the root causes of inefficiency. Determining healthcare system inefficiencies and comprehending the elements influencing public hospital efficiency are crucial (Alatawi et al., 2019).

According to article 31 of the national constitution, the government of the Kingdom of Saudi Arabia ensures that all citizens have free access to medical treatment in public sector facilities across the nation. As the main supplier of healthcare services in the Kingdom of Saudi Arabia, the Ministry of Health (MOH) is responsible for managing 60% of all healthcare providers through public institutions and obtaining 75% of all healthcare spending in the nation. The MOH also develops healthcare policies, creates strategies, oversees programs for the delivery of healthcare services, provides health education, and keeps an eye on all KSA health-related activities. MOH operates 282 public hospitals, totaling 43,080 beds in 2018, and 2,361 primary healthcare centers to provide primary, secondary, and tertiary healthcare services (Varabyova & Müller, 2016).

(Al-Qudah, 2016).

Given the current increase in global competition, any organization that wishes to survive must always assemble the strongest, able to take advantage of the resources that are actually available to them and gain a competitive advantage. Additionally, due to globalization, all parties have access to financial, material, and even technological advancements, making it impossible for any one party to monopolize them. This creates a fertile environment for excellence and competition, which is why focused organizations invest in their people. Ultimately, though, investing in human resources is the most crucial resource if one wishes to gain a competitive advantage. The phenomenon of human resources is always growing, with literature and other deontology management in modern reality moving to discuss individual behavior, or what is known as "human capital" (Al-Qudah, 2016).

Study Problem

Studying the impact of in-service training and education on the efficiency of health personnel's performance in the government health sector in the Kingdom of Saudi Arabia.

Study questions:

1. What are the factors related to in-service training and education of health cadres?
2. What is the impact of in-service training and education on the efficiency of health personnel's performance?
3. What are the barriers to efficiency?

Study objectives:

1. To show the factors related to in-service training and education of health cadres.
2. To explore the impact of in-service training and education on the efficiency of health personnel's performance.
3. To discuss the barriers to efficiency.

Study limitations:

- Geographical boundaries: The study will be applied in the Kingdom of Saudi Arabia.
- Time limits: The study will be implemented in 2022.
- Human limitations: The study will be applied to a sample of health personnel in the government health sector in the Kingdom of Saudi Arabia.
- Subject limits: limited to studying the "the impact of in-service training and education on the efficiency of health personnel's performance in the government health sector in the Kingdom of Saudi Arabia".

Literature Review

In order to provide preventive, diagnostic, and therapeutic health services to all members of a community, it was necessary to identify ways to increase the availability of efficiency and expertise from employees who are capable of carrying out the work at many health-care institutions. These efforts required tenacious and specially qualified working groups. This difficulty necessitates that workers meet specific requirements, including having a high level of physical and scientific credentials and the capacity for newly qualified individuals to maneuver in hospitals in an effective and efficient manner (Al-Qudah, 2016).

The development of basic, secondary, and tertiary healthcare services has been accorded great priority by the government, which has demonstrated its keen dedication to enhancing the health of the Saudi populace. Hospitals in the public and commercial sectors have made financial and human resources available to enhance the quality of preventative care and services. For the early movers in this industry, the private sector's contribution to the development of additional medical, nursing, and dentistry colleges as well as other specialized learning facilities presents both a problem and an opportunity. The need for healthcare professionals is expected to surge, and in order to meet this demand, collaboration between the public and private sectors must speed up the process by expanding learning and development opportunities. As a result, in the new context, the private sector's role in human resource training must also be strengthened and redefined, particularly for long-term care facilities, rehabilitation centers, day surgery centers, and secondary care hospitals where the complexity of care delivery is lower (Al-Hanawi et al., 2019).

Enhanced Knowledge and Skills

It can be difficult for nurses and medical professionals to stay knowledgeable and skilled. In order to adapt to this ongoing change, the idea of lifelong learning has emerged. "Any learning activity undertaken throughout life, to improve knowledge, skills, and competences within a personal, civic, social, and employment-related perspective" is the definition of lifelong learning. Access to lifelong learning is a barrier in many low- and middle-income nations, particularly for overworked medical professionals working in isolated rural or remote areas. Ensuring healthcare providers have the chance to engage in structured continuous professional development (CPD) or continuing medical education

(CME) activities throughout their careers is one way to facilitate access and promote the practice of lifelong learning. Furthermore, the use of information and communication technologies (ICT) to deliver efficient CME and CPD is of even greater urgency given the abrupt and unanticipated push to explore virtual solutions as a result of COVID-19 (Filipe et al., 2014).

CME is seen as a part of CPD, where CPD offers extra skills necessary to practice high-quality medicine, such as teaching, leadership, ethical, social, and personal skills, while CME focuses on enhancing the medical knowledge and abilities of health professionals. This kind of instruction may be required or optional. The primary objective is, however, to guarantee the currency of ability that upholds and sustains the caliber and proficiency of individuals who administer patients and deliver healthcare services. When CPD is mentioned in this work, it will be taken to include CME as well in order to facilitate future presentations (Sayinzoga & Bijlmakers, 2016).

In nursing education, simulation training has become an essential teaching technique that provides students with a safe, supportive, and controlled environment in which to learn and hone clinical skills. Simulation-based learning has attracted more attention as the complexity of healthcare continues to rise because of its potential to close the knowledge gap between theory and practice, foster critical thinking skills, and improve students' nursing skill competency (Alshammari et al., 2022).

The foundation of a nurse's on-going professional growth is continuing education, which helps them stay current on developments in healthcare, refresh their clinical knowledge and abilities, and adjust to changing patient care requirements. With the ever-evolving field of nursing and its rapid technology advancements, shifting demographics, and new healthcare concerns, it is more important than ever to pursue lifelong learning and skill development (Alshammari et al., 2022).

A wide range of learning opportunities, such as online courses, conferences, workshops, seminars, and advanced certification programs, are included in continuing education. These programs are designed to meet the varying needs and career goals of nurses in different practice settings and specializations. Through these training initiatives, nurses can improve their procedural competency, broaden their clinical repertory, and gain specific information and skills pertinent to their practice areas (Alshammari et al., 2022).

Upgraded Patient Care

Patient participation has emerged as a key component of high-quality healthcare and is a commonly articulated objective for healthcare institutions. The relationship between patients and clinicians when making decisions about their treatment or ways to support patients' efforts to manage their own care have been the traditional and most prevalent foci of this engagement. Nonetheless, there are increasing initiatives to incorporate patients in more comprehensive ways, such as those to enhance or restructure service delivery by integrating patient experiences. These initiatives are partly the result of growing understanding and acceptance that people who receive health services have legitimate roles, necessary knowledge, and a significant influence on the planning and provision of services. Patient participation can take many different forms, such as having patients serve on a board or having time-limited consultations on service reform, but its objectives are always the same: to raise the standard of treatment (Pomey et al., 2015).

quality standards and patient safety protocols

Patient safety is a critical aspect of hospital performance, and every organization aspires to improve the performance of its ICU staff nurses. Moreover, offering new staff development strategies to employees helps them produce high-quality work while minimizing errors. Nonetheless, utilizing the resources at hand to execute a training program for nursing staff is thought to be the most effective approach to enhance patient safety. Researchers discovered that there are six domains to consider when evaluating a "unsafe ICU": working

conditions, stress recognition, safety climate, job satisfaction perception of management, and teamwork atmosphere. Critical attention In order to guarantee patient safety, nurses should employ a range of techniques, frequently depending on their familiarity with the patient and their interpersonal interactions with other nurses and staff to see and avoid mistakes (Bassuni & Bayoumi, 2015).

Promotion and Advancement

The reallocation of a person to a higher level and a position with more duties, responsibilities, and authority than their current one is known as promotion. One of the most significant things that inspire employees to raise their game, develop their skills, and attain functional stability is the possibility of advancement. As a result, they are factors related to job satisfaction that have a big influence on employee morale and performance. They also provide a strong incentive to advance and grow while increasing productivity, which has an impact on improving the performance of the company and accomplishing its goals. Opportunities for promotion are seen as one of the primary factors in determining a worker's quality of life (QWL) (Rani, 2016).

Stability and Job Security

All workers need occupational stability and security, and it's one of the most important foundations of any organization's success because it fosters a sense of belonging and assurance that encourages employees to be innovative and make wise decisions in support of the organization's strategic objectives. Research suggests that job security is a function of an employee's tenure with the same company, without a reduction in pay, and the preservation of insurance and pension benefits. These factors have been shown to positively affect employee commitment to the organization's objectives, job satisfaction, and productivity. Employees value job security, and studies have shown that permanent employment both gives employees security and enhances their quality of work life, indicating a positive and moral relationship between the two. An increasing amount of research in the literature demonstrates that job security plays a significant role in determining employees' quality of work life (QWL) (Karimi et al., 2015).

Job Satisfaction

A common definition of satisfaction is a joyful or contented emotion that arises from meeting a need or desire. The way workers view their work is known as job satisfaction, which also include factors like comfort level, stability and security of the workplace, productivity, involvement in unions, equitable pay, leadership, and job empowerment. Research has looked at the significance of job satisfaction as a crucial element of the QWL, and numerous scholars have discovered that job happiness plays a significant role in determining an employee's QWL case measurement (Maghaminejad & Adib-Hajbaghery, 2016).

Barriers to Efficiency and Utilization of Health Resources

Ineffective Hospital Management

The primary obstacles to efficiency in public hospitals have been noted as being the inadequate administration of health resources, the absence of capable hospital managers, and the poor quality of administrative leadership. Some hospital directors have been reported to exhibit subpar administrative and leadership abilities. These health executives are not able to meet the demands of health services by making the necessary use of the resources that are already in place. It is suggested that two of the biggest barriers to success are a lack of sophisticated strategic planning and a lack of well-defined objectives and goals. The goal of hospitals is not clearly defined, nor is it clear how to optimize the use of medical specializations and available resources (Alatawi et al., 2022).

Lack of Monitoring

Lack of follow-up, annual staff performance evaluations, and adequate monitoring caused many hospitals' health service delivery to fall short of expectations. The failure to pinpoint the root causes of resource waste and to implement rules and processes correctly are obstacles to high performance. According to a MOH official, there is a significant influence on medical intervention, quality and safety are decreased, and critical health problems are made worse when health service providers' requirements are not met. The MOH is not providing enough oversight or follow-up (Alatawi et al., 2022).

Aim of the study:

To detect the impact of in-service training and education on the efficiency of health personnel's performance in the government health sector in the Kingdom of Saudi Arabia.

Methods

Research design:

In the Kingdom of Saudi Arabia, a descriptive analytic cross-sectional research design was conducted with the purpose of detecting the impact of in-service training and education on the efficiency of health personnel's performance in the government health sector in the Kingdom of Saudi Arabia. This design is a method that is both systematic and organized, and it is used to gather data from a sample of individuals or entities that are part of a larger population. The major objective of this design is to provide a comprehensive and accurate description of the characteristics, behaviors, perspectives, or attitudes that are present within the target group.

Research Setting:

The study will be conducted in the government health sector in the Kingdom of Saudi Arabia.

Subject:

Those health cadres who are employed in the government health sector in the Kingdom of Saudi Arabia, both male and female, will be required to meet specific inclusion criteria in order to be considered for inclusion in the sample.

Sample size:

Study sample was 800 of health cadres selected via the systematic random sampling method. When conducting an empirical research with the purpose of drawing conclusions about a population based on a sample, the size of the sample is an essential component to consider. In actual fact, the sample size that is used in an investigation is established by taking into consideration the cost of data collection as well as the need to have enough statistical power.

Inclusion Criteria:

The inclusion criteria were set as follows:

- (1) health cadres who working in the government health sector in the Kingdom of Saudi Arabia.
- (2) female and male.
- (3) from Saudi Arabia.

Sampling Technique:

Participants submitted data through a survey. Data will be collected by questionnaire.

Tools for data collection:

It will deal with Participants demographic such like age, gender, marital status and educational level. Also issues concerning the impact of in-service training and education on the efficiency of health personnel's performance in the government health sector in the Kingdom of Saudi Arabia.

Validity:

The revision of the tools were ascertained by a panel of experts to assess the content validity of the tools and the required modification was done appropriately.

Ethical considerations

Data was submitted by individuals via questionnaires. Participants were notified that participation in the research would be elective and that their anonymity would be preserved. Data will be acquired using a self-reported questionnaire. The ethics committee will offer clearance for this initiative. Before the questionnaire was conducted, each participant supplied signed informed consent.

Results

Validity and Reliability Tests:

Internal Consistency Reliability Calculation:

After determining the legitimacy of the internal consistency between the statements of each objective and the overall score for the corresponding axis, Pearson's Coefficient Correlation was computed in order to validate the validity of the statement. Following the construction of the research instrument and the establishment of its apparent validity by the presentation of the instrument to a panel of arbitrators who were both knowledgeable and experienced in the area, this step was taken.

For the purpose of determining whether or not the questionnaire has an internal reliability, it was administered to a pilot sample that consisted of thirty members of the healthcare staff. After that, the researchers determined the correlation coefficients in order to assess the internal validity of the research instrument, as the tables that follow demonstrate:

Table (1): Correlation coefficients of items in the first axis with the total score.

Statement number	r	Statement number	r
1	0.496**	7	0.757**
2	0.868**	8	0.685**
3	0.632**		
4	0.646**		
5	0.891**		
6	0.654**		

** : p value <0.001

It is clear from the previous table that all of the statements are significant at the 0.01 level, as the values of the dimensional correlation coefficients ranged between (0.301 - 0.891), which are excellent correlation coefficients, and this offers a hint of strong internal consistency coefficients as well. It provides strong validity indications that may be relied in utilizing the present research technique.

Reliability of the study tool:

As for testing the reliability of the questionnaire, we utilized Cronbach’s alpha coefficient, and the accompanying table illustrates the reliability axis of the research instrument as follows:

Table (2): Cronbach’s alpha coefficient reliability coefficient for the total score of the questionnaire

	No. of statements	Cronbach’s alpha
comprehensive quality standards questionnaire	8	0.856

The table showed that the Cronbach’s alpha reliability coefficient for the total score of the questionnaire was (0.856), which is a good reliability coefficient suitable for the study.

Application Method of the Study Tool:

After collecting the study data, the researchers reviewed it in preparation for inputting it into the computer for statistical analysis. Subsequently, they transcribed it onto appropriate tables, provided commentary, and linked it to previous studies. Responses were given five levels: strongly agree (5 points), agree (4 points), neutral (3 points), disagree (2 points), and strongly disagree (1 point). To determine the length of the pentavalent scale cells used in the study Phrases, the range (5-1=4) was calculated and divided by the number of questionnaire cells to obtain the correct cell length (4/5=0.80). This value was then added to the lowest value on the scale (or the beginning of the scale, which is one) to determine the upper limit of the cell. The following table illustrates the method for correcting the Likert pentavalent scale.

Table (3): Method for correcting the scale.

Scale	The weight	The average arithmetic mean value ranges
Strongly Disagree	1	From 1 to less than 1.80
Disagree	2	From 1.81 to less than 2.60
Neutral	3	From 2.61 to less than 3.40
Agree	4	From 3.41 to 4.20
Strongly agree	5	From 4.21 to 5.

Table (4): Socio demographic characteristics of the studied participants

Sociodemographic variables	Cases (n=800)	
	No.	%
Age category (years)		
Less than 25 years	200	25%
From 26 to 35 years	250	31.25%
From 36 to 47 years	90	11.25%
More than 47 years	260	32.5%
Gander		

Male	450	56.25%
Female	350	43.75%
Marital status		
single	240	30%
married	290	36.25%
absolute	270	33.75%
Job		
doctor	50	6.25%
pharmaceutical	40	5%
specialist	320	40%
Technical	290	36.25%
nurse	65	8.125%
Administrative	35	4.375%
Educational status		
Diploma or less	240	30%
Bachelor's	200	25%
Postgraduate studies (PhD - Master)	360	45%
Years of experience		
1 – 5 years	230	28.75%
6 – 10 years	220	27.5%
11 - 15 years	140	17.5%
16 – 25 years	210	26.25%

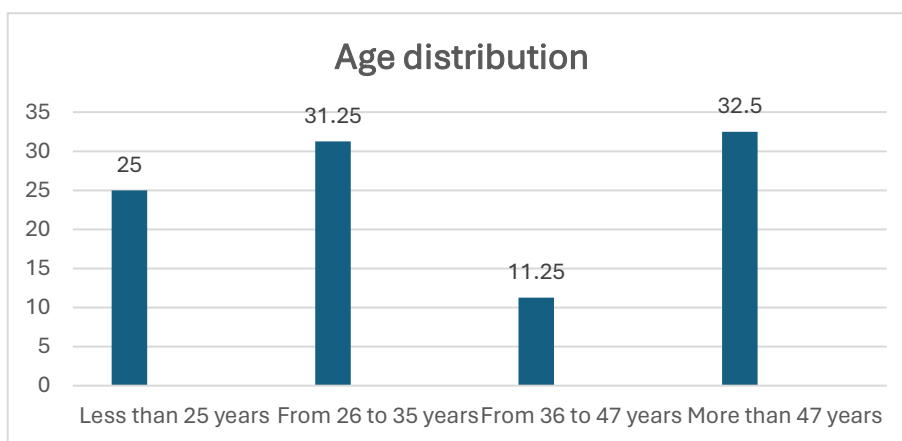


Fig (1): Age distribution among the studied participants

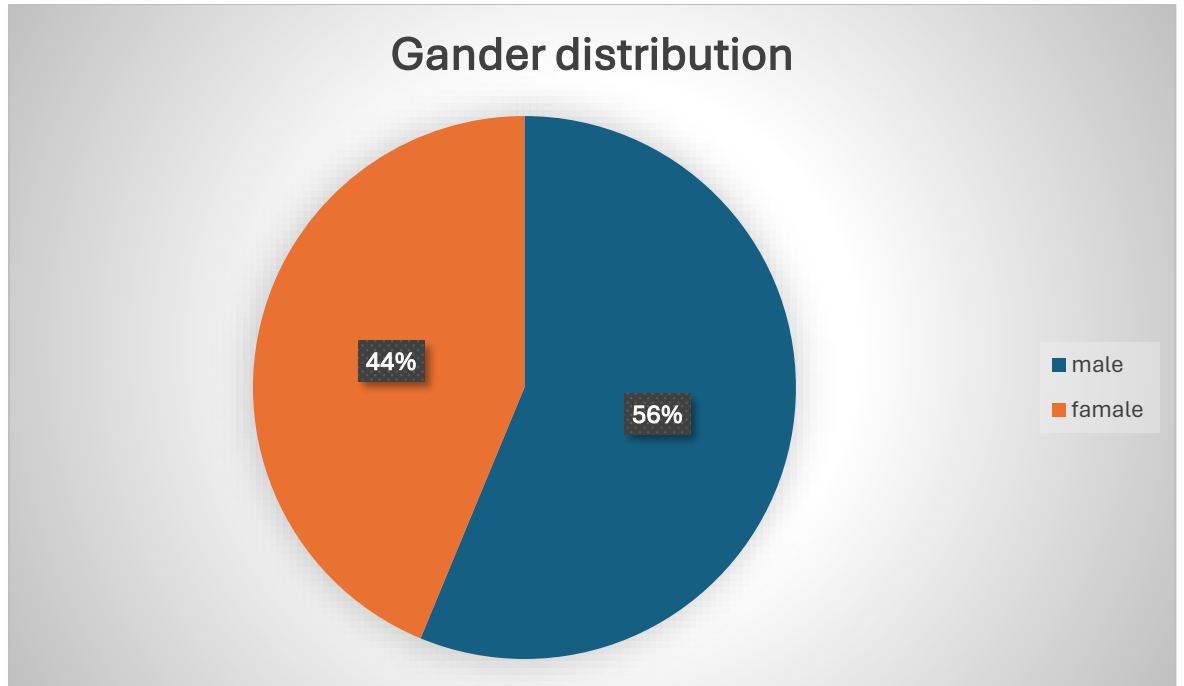


Fig (2): gender distribution among the studied participants

Table (1) & Figure (1-3) showed that 11.25% and 31.25% of the studied participants were aged 36 -47 years and 26-35 years respectively. Regarding to the gender, more than half (56%) were males and 44% were females. 40% of the studied participants were specialist while only %36.25 was Technical. As regard to years of experience, 27.5% of the studied participants worked from 6 – 10 years.

Secondly: Results Related to the Axes of the Questionnaire:

Table (5): response of the studied participants regarding to the first axe (In-Service Training and Education) of Questionnaire

No.		Cases (n=800)			
		Mean	SD	Category	Rank
1-	Have you participated in any in-service training programs provided by your organization in the past year?	4.23	0.865	Strongly agree	3
2-	Clinical skills enhancement was covered in the training programs	4.11	0.67	Agree	5
3-	Leadership and management skills were covered in the training programs	4.52	0.865	Strongly agree	1
4-	Information technology training was covered in the training programs	4.26	0.758	Strongly agree	2
5-	Patient communication and interaction were covered in the training programs	4.22	0.657	Strongly agree	4
Total score		4.29	0.788	Strongly agree	

From the results shown in Table (5), it is evident that there is variation in the agreement among the study participants regarding the comprehensive quality standards and the productivity of health personnel in the government health sector in the Kingdom of Saudi Arabia. The participants' agreement averages ranged from (4.11 to 4.52), falling into the fourth and fifth category of the Likert scale, indicating agreement to strongly agreement with the study tool. This demonstrates consistency in agreement among the study participants regarding the impact of in-service training and education on the efficiency of health personnel's performance in the government health sector in the Kingdom of Saudi Arabia.

Phrase (3): Leadership and management skills were covered in the training programs. ranked first with an average agreement of (4.52)

Phrase (4): Information technology training was covered in the training programs. ranked second with an average agreement of (4.26)

Phrase (3): Leadership and management skills were covered in the training programs. Ranked third with an average agreement of (4.23)

Table (6): response of the studied participants regarding to the second axe (Performance Efficiency) of Questionnaire

No.		Cases (n=800)			
		Mean	SD	Category	Rank
1-	How do you perceive the impact of in-service training and education on your overall job performance efficiency?	4.132	0.699	Agree	2
2-	How satisfied are you with the opportunities for continuing education and professional development provided by your organization?	3.735	0.741	Agree	3
3-	the effectiveness of in-service training programs enhances job performance	4.612	0.831	Strongly Agree	1
Total score		4.31	0.821	Strongly agree	

Phrase (3): the effectiveness of in-service training programs enhances job performance. ranked first with an average agreement of (4.612)

Phrase (1):How do you perceive the impact of in-service training and education on your overall job performance efficiency? ranked second with an average agreement of (4.132)

Phrase (2):How satisfied are you with the opportunities for continuing education and professional development provided by your organization? Ranked third with an average agreement of (3.735)

Discussion

When it comes to improving the overall performance of health staff working for the government in the health sector in the Kingdom of Saudi Arabia, in-service training and education remain very important factors. Healthcare personnel are able to keep their knowledge and skills up to date via the implementation of continuous education programs, which allows them to align themselves with the ever-evolving medical practices and technology. This results in greater clinical competence, improved care for patients, and higher efficiency in the delivery of healthcare (Alatawi et al., 2022).

An further way in which in-service training programs assist to professional growth is by encouraging a culture of continuous education among those who work in the health care industry. The purpose of these programs is to increase job satisfaction and retention rates among healthcare workers by providing possibilities for skill upgrading, career promotion, and specialization (Varabyova & Müller, 2016).

Conclusion

Every technology strategy improves knowledge, abilities, and attitudes; pure e-learning is on par with in-person instruction. CPD training courses, however, need to be thoughtfully planned and organized. They must be needs-based, interactive, authentic (connected to real-life practice or realistic circumstances), and have well-defined goals and objectives. Additionally, they need to be well-designed, grounded in research, employ a variety of delivery strategies and exposures, and include integrated learner self-assessment activities. Lastly, they need to use adult learning concepts and acknowledge the motivators of self-directed, independent, lifelong learners.

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