

# Lifelong learning among healthcare professionals in public hospitals: historical analysis and multiple case studies in Morocco

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**Abstract.** The Moroccan public hospital is crucial in providing healthcare, and its mission is to improve the population's health. It is currently in a conclusive phase, given its decisive role in the success of the ambitious overhaul. In this sense, human resources are a crucial foundation, as they guarantee quality and safety of care. Indeed, the continuous upgrading of skills is a real challenge for healthcare workers, among other things, because their practice must meet the evolving requirements of the health system and be in line with the population's specific needs. Lifelong learning for healthcare workers is a crucial issue. This study aims to identify the place of lifelong learning among health professionals in Moroccan public hospitals. The results indicate that all healthcare professionals interviewed know the importance of training to provide quality and safe care. However, only a quarter of them understands lifelong learning as a concept. Moreover, several lifelong learning practices are concrete and implemented despite certain obstacles. There is now a clear need to continue the historical process of improving the quality of training for healthcare workers by building an explicit system that focuses on lifelong learning while integrating a knowledge management approach. This research provides a good and more accurate overview of lifelong learning among healthcare workers. It also initiates reflection and debate on health professionals' need for lifelong learning, and it's a real opportunity to raise awareness about structuring lifelong professional training while integrating a knowledge management approach.

**Keywords:** Lifelong learning, Healthcare professionals, public hospitals, energy consumption, knowledge management.

## 1. Introduction

The Moroccan health system is faced with a complex and uncertain environment. It is undergoing a thorough overhaul and rehabilitation to accompany Morocco's significant royal project of generalizing social protection. This health coverage will cover many citizens in the future, which will considerably increase the pressure on the national health system [1]. The Moroccan public hospital is crucial in providing healthcare, and its mission is to improve the population's health. Today, it is in a conclusive phase of its existence, given its decisive role in the success of the ambitious overhaul of universal coverage and all the reforms it will trigger.

In this sense, human resources are a vital element of the hospital organization, as they guarantee the quality and safety of care [2]. Also, human capital is the central resource for coping with the need to adapt to changes, to permanent technological and medical innovations, and above all, to meet the health system's new needs and quality requirements. Indeed, the hospital world is constantly evolving and changing. We are witnessing, so to speak, an appearance of emerging diseases, an acceleration of innovation, a rapidity of technological developments, an explosion of knowledge, and an increase in the complexity of skills [3].

In this sense, training is of singular importance to accompany changes that are often accelerated and imposed because these changes are recurrent and dynamic [4]. This is the case for training healthcare professionals who have recently been operating in high-demand care organizations and are trying as best to produce safe, high-quality care [5]. Indeed, continuous upgrading of skills is a real challenge for caregivers, among other things, because their practice has to meet the evolving requirements of the healthcare system and, above all, has to be perfectly attuned to the increasingly demanding needs of the population [6].

For healthcare professionals, it is impossible to limit the learning of new knowledge or the development of new skills to one point in life, as this would inevitably compromise the quality of their care. Lifelong learning for healthcare professionals should be seen as a critical issue given the rapid evolution of the profession and the development of medical science and technology, which necessitates continuous and necessary adaptation of practices to avoid gaps that could impact the care process [6].

In Morocco, the shortage of human resources is one of the most striking features of the health sector. It is a serious problem that persists despite the efforts made by the Ministry of Health [7]. This makes it necessary to have highly qualified human resources for the proper functioning of the hospital structure. This is why we will draw up an inventory of lifelong training for healthcare professionals in Morocco to clarify the place it should concretely occupy. This will be done by answering the following question: what is the place of lifelong learning among health professionals in public hospitals? This subject is of unprecedented interest in Morocco, and the development of skills and lifelong learning are among the objectives of the country's social and economic policies, thanks to the New Development Model. Thus, this research aims to present a good and more precise overview of this topic among caregivers. It also aims to initiate reflection and debate on health professionals' lifelong learning needs.

## 2. Lifelong learning

### 2.1 *Lifelong training: basic concepts and strategic contributions*

The current context is characterized by globalization, rapid technological change, evolving digital transformation, climate change and environmental degradation, demographic and epidemiological change, and also the considerable impact of COVID-19 on the world of work and skills development. Under these conditions, skills depreciate faster than in the past. This, in turn, generates gaps and deficiencies in skills, thus requiring the need to adapt and acquire appropriate knowledge and skills through lifelong learning [8].

Lifelong learning can be defined as learning that continues throughout life: learning that is flexible, diverse, and available at different times and in other places. Lifelong learning cuts across sectors, promoting learning beyond traditional schooling and adult life [9]. This definition is based on the four "pillars" of education for the future defined as follows [10]:

**Learning to know:** mastering learning tools rather than acquiring structured knowledge.

**Learning to do:** equipping people for the kinds of work needed now and, in the future, including innovation and adapting learning to future working environments.

**Learning to live together and with others:** resolving conflict peacefully, learning about others and their cultures, fostering community capacity, individual skills and capabilities, economic resilience, and social inclusion.

**Learning to be:** education contributes to the full development of a person: mind and body, intelligence, sensitivity, aesthetic appreciation, and spirituality. Lifelong learning is an active process in which the learner seeks knowledge and understanding and uses it to meet their professional needs throughout life [11]. It should be noted that the concept of "lifelong learning" has evolved considerably since it first appeared over a hundred years ago. In the second half of the 20th century, it referred mainly to adult or continuing education as a form of education in its own right.

Today, lifelong learning, education, or training encompasses all knowledge-acquisition activities undertaken throughout life to develop skills and qualifications [12]. And lifelong learning means [9]:

- The *acquisition* (by an individual) and upgrading of all kinds of abilities, interests, knowledge, and skills, from pre-school to retirement and well beyond.

- The *recognition* (by societies, institutions, governments, and individuals as students) of all forms of learning: formal, non-formal, and informal education, as relevant and valuable.

Whatever terms are used; learning, education, or lifelong learning. Schools and universities are not the only places of learning, nor even the leading education providers. The importance of lifelong learning is growing and includes all forms of learning in all circumstances, which has shifted roles and locations [9]. Lifelong learning is more than continuous training or education. It must offer multiple learning opportunities, including the practical application of knowledge in different contexts and environments [13]. Learning should not only be systematically extended to the whole life span. It should also be "lifewide," which means generalized to all areas of life so that learning environments are created where the different learning modes organically complement each other. "The "lifewide learning" dimension emphasizes the complementarity between formal, non-formal, and informal learning" [14].

Indeed, lifelong learning and skills development has been gaining momentum in recent times in light of the profound social and economic changes. It seems to meet a significant economic and social need. It is increasingly seen as an essential aspect of society and a strategic tool to prepare for the future of communities [12].

*Figure 1: The complementarity between learning and the evolution into a learning organization*

The current trend is to focus more on the human capital that holds knowledge. This means that knowledge has become the leading resource of the future [15]. Knowledge is a kind of 'grey capital' [16] that should no longer be neglected because knowledge is a strategic resource for any organization [17]. An organization's performance depends significantly on using its knowledge and skills (organizational, collective, and individual). It is essential to know that competence mobilizes different types of knowledge and know-how in a combinatory manner. It also refers to how knowledge is mobilized by individuals placed in operational situations often subject to technical, economic, and psycho-sociological constraints. In this sense, information asymmetry, lack of learning, imperfect training practices, and barriers to access to training are all factors that contribute to skills mismatch [18]. The risk is that the gap will widen and affect both the employability of workers and the productivity and performance of organizations.

This is very much in line with a knowledge management approach and focuses on the fact that building the capacity of all individuals and organizations promotes sustained economic growth and fosters the evolution of learning organizations that are agile to transform themselves and then toward a "learning society," acting as both a driver of change and an engine for sustainable growth [12]. Moreover, the knowledge that interests organizations is the individual and collective know-how that determines its organizational knowledge and capacity for action, adaptation, and evolution. Therefore, the main objective of the learning society is the foundation of the knowledge society based on the creation of new knowledge, the application and sharing of existing knowledge, and the quality of education should be measured by the usability of the knowledge learned, the skills and attitudes essential to work successfully in today's challenging and changing conditions [9].

Lifelong learning is, therefore, an essential element in helping individuals to adapt to change and thereby maximize the positive effects of change, such as strengthening the resilience of workers and organizations and turning constraints into opportunities. Ultimately, in today's world, access to the latest information and knowledge, as well as the motivation and ability to use these resources intelligently, both personally and collectively, are becoming the key to competitiveness and are also beneficial to the employability and adaptability of the workforce [16].

## ***2.2 Moroccan Public hospital: The place for lifelong learning***

Morocco is involved in a social protection project, and to generalize medical coverage, it is undertaking several reforms to reorganize the national health system. The Moroccan public hospital has a decisive role in accompanying these transformations, among other things, to guarantee access to the right to health for citizens. This being said, the mobilization and valorization of human resources and the development of their skills is a fundamental pillar for the success of this project [1] [7].

In particular, healthcare workers do contribute to improving the quality of care and also play a key role in patient safety by providing appropriate follow-up and carrying out many other activities to ensure that patients receive high-quality care [19] [20] [21]. In times of crisis, this staff is often called upon to take on new duties and responsibilities, perform new tasks, and take on critical activities while ensuring that care procedures are kept up to date to provide better patient care [22].

In this sense, health professionals must regularly update their skills, and lifelong learning allows for the renewal and updating of skills within health institutions [6]. This is a fundamental lever for increasing the efficiency of services and improving the performance of hospitals and the entire health system.

Lifelong learning has therefore been recognized as an absolute necessity for health professionals whose profession is changing in a complex, uncertain, and constantly changing environment [23] [24]. It has to be said that no initial education program can indeed enable health professionals to acquire the knowledge and develop the skills they will need throughout their professional lives. Scientific and technological development and the modernization of professional techniques and practices require continuous updating through acquiring new knowledge, developing other skills, and renewing procedures to ensure patient safety [21]; it is strongly recommended that they participate in lifelong learning to acquire the qualifications required to provide care to different societies. It is even necessary to update the curricula periodically [25]. The rapid evolution of practices resulting from new knowledge and technologies poses a real challenge to hospitals, especially to health professionals who must equip themselves to anticipate the emergence of new roles, often with increased implications [26]. Lifelong learning not only makes it possible to update knowledge and maintain skills but is also strongly linked to the evolution of healthcare practice, the development of the profession, and the enhancement of the safety and quality of services [27].

The Moroccan public hospital must take up the challenge of providing the population with care that meets recognized safety and quality standards. Acting, through lifelong learning, on knowledge, beliefs, attitudes, and skills to modify behaviors promotes safe practice by maintaining and improving professional competence [28]. This learning is integral to the search for excellence and innovation in services and the renewal of practices by integrating techniques such as reasoning or problem-solving. It is also an appropriate way of incorporating evidence-based results into care practice. Thus, lifelong learning aims to enable learners to understand the problems and contribute to efforts to solve them [29]. In other words, it allows for better individual and collective knowledge exploitation. It significantly develops the skills of adaptability and flexibility that enable a knowledge management approach to implement learning hospitals, i.e., hospitals that are likely to introduce new routines alongside or in place of existing routines, to be agile in embracing adversity, to renew themselves and to innovate constantly [43].

In the short term, the Moroccan public hospital stands to gain a lot because, in the context of a shortage of qualified staff [30], promoting lifelong learning is a winning strategy, if only because it is an important attraction and retention factor. Indeed, it has been shown in Magnet Hospitals that health professionals are more satisfied with their work environment

when they have more access to learning activities. They are also more likely to continue their careers within their work institution [31]. Lifelong learning is an essential lever of transformation for the Moroccan public hospital, which is undergoing reform and has an apparent shortage of human resources. It is more than necessary to rely on the reinforcement of the competence of health professionals to professionalize and maintain them. It is a way of promoting their productivity, their emancipation, and their proper involvement in change.

### **3. Method**

Please This study aims to identify and describe the place of lifelong learning among health professionals in Moroccan public hospitals while presenting the barriers to lifelong learning as perceived by health workers. To this end, we undertook a thorough literature review based on Moroccan institutional reports and a selection of international and national literature reviews and scientific articles. The search was conducted on several English and French databases. It included studies that were imported and managed by Zotero software after being assessed for quality and eligibility to identify studies relevant to our research object. Secondly, we used an integrated multiple case study design that allows for flexible exploration of various levels of analysis, moving from the individual to the professional group and then through the organizational level. We also traced through a historical analysis the training of healthcare professionals to clarify its development over the last years in Morocco.

#### **3.1 Cases and participants' selection**

We deliberately selected three different public hospitals designated for reasons of anonymity as A, B, and C. Our choice was guided by the maximum variation between the study sites based on the following criteria: date of construction of the hospital, number of beds, size of the population served; rural or urban area, the total number of human resources, presence of a continuing education unit within the hospital, province or region. The sample was constructed by selecting caregivers and some managers working in the three hospitals. The selection was based on the gender, age, work experience, and current position of the workers in the different specialties and units.

#### **3.2 Data collection and analysis**

We conducted three empirical case studies in the three hospitals using semi-structured interviews over 11 months. We considered the ethical principles (self-determination, informed consent, anonymity, fair and equitable treatment, and neutrality and objectivity in the presentation and discussion of results).

We conducted 48 face-to-face interviews until saturation was reached [32]: 16 at Hospital A, 15 at Hospital B, and 17 at Hospital C. The average duration of the interviews was 25 minutes. The interview guide was pre-tested, corrected, and validated. The questions focused on the importance of lifelong learning for the individual, the organization, and society, the activities implemented in this respect, whether formal, informal, or non-formal, and finally, on the obstacles that might prevent lifelong learning in the context of a Moroccan public hospital. The interviews were conducted in such a way as to encourage discussion and to enable the views, experiences, and knowledge of health professionals to be gathered. All interviews were recorded and then transcribed. The corpus of data from the interviews was managed with NVivo software and then analyzed thematically and interpreted according to the objective of our study.

## 4. Findings and Discussion

In the following section, we present and discuss how health professionals have described the place of lifelong learning among health professionals in Moroccan public hospitals. We begin with a historical analysis of the training of healthcare workers in Morocco, which provides a better understanding of the importance of their training.

### 4.1 A historical analysis of the training of healthcare workers in Morocco

An efficient healthcare system that meets the challenges of public health while optimizing quality, safety and accessibility is a concern shared by many countries, including Morocco. The constitution of the Kingdom of Morocco in 2011, notably its article 31, has moreover valued the principle of the right to health and the right of access to healthcare [1] [2] [7] [33].

This places greater emphasis on the importance of training health workers to meet the challenges of strengthening Morocco's health systems and responding adequately to the demanding and changing needs of the population.

It must be said that after independence, the Ministry of Health had to train as many health professionals as possible as soon as possible to make up for the shortage of personnel due to the massive departure of foreign managers. Initially, the training focused mainly on the cadre of auxiliaries before national diplomas were introduced. The most critical steps in this reform process were as follows to restructure the training system:

**Table 1. Historical evolution of the training of healthcare workers in Morocco [34] [35] [36].**

<i>Key dates</i>	<i>Amendments</i>
Before independence	Practice and on-the-job training (6-month internship) in regional hospitals under the tutelage of French doctors. The trainees obtained a diploma of Assistant Health Specialist (Vizier order of 5 October 1913).
1941	Creation of a French school for nurses and social workers in Casablanca: a "French State diploma for hospital nurses" is issued and accredited by the French authorities
1944	Creation by the colonial administration in Casablanca of nursing schools for Muslims, the "École d'Auxiliaires Médico-Sociales Musulmanes" (School for Muslim medical and social auxiliaries): trains general nurses and confers a diploma of "Infirmier Breveté.
After independence in 1956	Introduction of several reforms to expand the number of nursing schools to address the severe shortage of nurses due to the massive departure of foreign cadres.
1963	The first formalization of the training curricula for nurses and health executives.
1973	Structuring of the training curricula and the development of the different branches.
1983	Revision/adaptation of training curricula: structuring by needs, introducing objective-based training, and strengthening of teaching skills of the teaching staff.
1993	Reform of paramedical training and integration of the senior management training system.
2003	Launch of the LMD (Licence-Master-Doctorat) system and training of the pool of Master's teachers in nursing/ Montréal University / Faculty of Science in Nursing
2013	-Commitment and mobilization of political, institutional, and trade union bodies and associations for implementing the LMD system. -Establishment of the Higher Institutes for Nursing and Technical Health Professions (ISPITS) by bringing them into line with law n° 01-00 on the organization of higher education.



The training system for healthcare workers has constantly been evolving through the implementation of several projects to raise the level of training and thus support the reforms of the health system and higher education, and above all, to strengthen the skills of healthcare workers and therefore be able to meet the demands and needs of the population.

As healthcare practice is a professional discipline, the training of healthcare workers leads to the formation of a health professional with specialized knowledge in a specific and well-defined field (training specialties) [34] [35]. It should be emphasized that professional disciplines differ from academic studies in their practical component. Care practice requires critical thinking and problem-solving skills, specialized psychomotor and technological skills, and a professional value system [37]. Moreover, reflective skills, creativity, and critical thinking are essential to transforming knowledge into practice.

In this sense, in addition to initial training and research development, the training system for healthcare workers in Morocco also focuses on continuing education that accompanies healthcare workers during their practice. One way to guarantee their capacities is to provide them with practical lifelong training to maintain and constantly improve their skills.

Various plans have been put in place to ensure the continuing education of health personnel, such as establishing a national continuing education strategy in 1990, which was revised in 1999 and followed by the decentralization of the continuing education process [38].

In-service training has been promoted in all health policies, which have been continually adapted to ensure that a sectoral in-service training strategy is implemented. This was done through the Health Action Plan 2008-2012 and the Sector Strategy 2012-2016 [39] [40].

Then in 2019, the National Strategy for Continuing Education of the Ministry of Health was launched to improve the capacity building of health personnel. This strategy is based on a vision to be one of the most effective means of motivating and maintaining human resources at an optimal level of competence. It will meet the challenges of scientific and technological developments to address the new health needs of citizens [34].

The training of healthcare workers in Morocco has undergone a significant historical evolution, and several efforts continue to be put in place to continuously improve the quality of the practice of healthcare professionals who must be more critical in solving increasingly complex problems. This further underlines the importance of healthcare workers as human capital. They also need to be part of the continuum of lifelong learning to enable them to learn by doing and, above all, to reflect continuously on how to improve their practice.

In the following section, we present health professionals' views on the place of lifelong learning in Moroccan public hospitals in this case study.

#### ***4.2. Characteristics of the study participants***

The distribution of participants from the three hospitals, A, B, and C, by function, work experience, age category, and gender are summarised below in Table 2.



**Table 1. Characteristics of study participants**

		Hospital A	Hospital B	Hospital C
Functions	Chief nursing officer	1	1	2
	Nursing staff	15	14	15
	<b>Total</b>	<b>16</b>	<b>15</b>	<b>17</b>
Work experience	Less than 5 years	2	0	1
	Between 5 and 10 years	4	5	6
	Between 10 and 15 years	6	0	3
	More than 15 years	4	10	7
	<b>Total</b>	<b>16</b>	<b>15</b>	<b>17</b>
Age category	20–30	1	2	2
	31–40	5	3	9
	41–50	4	6	3
	51–63	6	4	3
	<b>Total</b>	<b>16</b>	<b>15</b>	<b>17</b>
Gender	Female	9	7	10
	Male	7	8	7
	<b>Total</b>	<b>16</b>	<b>15</b>	<b>17</b>

### 4.3. The importance of lifelong learning

For a quarter of our respondents, lifelong learning is an unavoidable avenue for healthcare workers. This is given the growing complexity of professional situations, the many organizational changes, and the development of new technologies. As respondent (A 8) explains:

*"Lifelong learning is a responsibility to be considered carefully towards us, the hospital, and the population; we must never stop learning!"*

However, half of our respondents do not know what lifelong learning is, as confirmed by the respondent (C 13):

*"No, I don't know what lifelong learning is; I've never heard of it around me! ...but I think we have to train to improve our skills..."*

This confirms that the orientation of healthcare workers towards lifelong learning remains low in developing countries, which may have implications for the successful implementation of continuing education programs and, above all, undermine ongoing efforts and attempts to improve the quality of care [41]. On the other hand, all respondents knew the importance of learning to improve their practice and enhance their skills. In other words, moving towards lifelong learning requires promoting a learning culture among healthcare workers and mobilization, synergy, and coordinated action by all the actors involved [27].

For others, lifelong learning guarantees the constant improvement of the practices of professionals who are called upon to meet the challenges of quality and safety in care for the citizen. As this healthcare professional (B 12) confirms:

*"Our role towards society is no longer in question since the arrival of Covid-19. Everyone has understood that our role is important! So, to do things well, we have to keep learning even if it is complicated and not always easy to do so... we try as*

*much as we can to participate at our level in educating today's and tomorrow's citizens...".*

According to the professionals interviewed, healthcare professionals must continuously update their skills to improve their practice, strengthen their professional performance, and correctly play their role in the hospital. This was supported by the health professional (A 4):

*"We have experienced the evolution of the healthcare professional's role! It changes every day as the patients come and go, and it requires us to update our knowledge to keep up to date and develop our skills, and to do so every day and in a persistent way. Learning helps me to do what is expected of me and also to supervise trainees, and new recruits, to discuss and exchange with my team... The hospital really needs us. It absolutely cannot function without us! We are well aware of this and ensure that we do our part to satisfy the needs of the nowadays too demanding patient".*

Lifelong learning is also essential for self-fulfillment, self-assertion, self-actualization, and self-satisfaction. Respondent (C, 15) explains it well:

*"I really need to learn. It reassures me and gives me pleasure. I am a new recruit and need to learn to do better. I feel a sense of satisfaction and accomplishment in expanding my knowledge. I work and study. I do shifts at night, and in the morning, I go to university. I am enrolled in a master's degree. It isn't easy, but I'm doing this to improve my career. I also do this for myself, to satisfy my intellectual curiosity, to learn new things..."*

Indeed, lifelong learning is naturally sought through work and life experiences, as the learner aims to acquire new knowledge for professional or personal reasons. The knowledge results from a combination of capturing experience and transforming it. Lifelong learning has become necessary with the continuous emergence of changes and new technologies that impact how we receive and capture information, collaborate with others, communicate, and learn daily [13].

Furthermore, lifelong learning goes so far as to foster creativity, initiative, and responsiveness in individuals. This enables them to be adaptable and agile in a changing environment. Lifelong learning helps to improve skills for dealing with uncertainty, communicating across and within cultures, sub-cultures, families, and communities, negotiating conflict, etc. [12] [13]. Adopting lifelong learning can democratize access to information and deploy knowledge, thus developing the willingness to learn. The desired evolution is toward learning organizations, cities, and societies that are agile in embracing change and better-managing adversity [9].

#### **4.4. The different forms and activities of lifelong learning**

Wherever Developing skills and knowledge and making the experience gained over the years profitable and beneficial can be done in many ways throughout work and beyond any initial training. It is about experimenting, learning, and applying throughout life. According to one respondent (B 7):

*"To develop my knowledge, I take advantage of some training activities occasionally organized within the hospital, in the region, or at the national level. I have frankly taken advantage of some training courses ... for example, I took advantage of a Mooc organized by the ENSP on health economics..."*

Another respondent (C17) states that:

*"Several continuing education courses are now organized, and most hospitals have a continuing education department... I took advantage of this, and I was fully*

*covered. In addition, I am self-training; I look for accessible and free training on the internet. You just need the time, the money, and the will to improve yourself! "*

Indeed, the Ministry of Health has strategies for training and developing the skills of health workers that put in place several cycles of development or improvement [5] [33]. The capacity development of healthcare workers is an intrinsic part of the essential functions of any health system. It constitutes a fundamental lever for increasing the efficiency of services and improving performance [1] [33].

Another healthcare professional (A 10) added that:

*"Learning to improve one's skills also involves exchanging and discussing with colleagues, for my part, sharing experience helps me to solve many problems, allows me to avoid mistakes... For example, during the Covid-19 crisis, I joined chat groups among health professionals, and we discussed all the latest news, procedures, complications, and mistakes to avoid... It was also a tool to exchange information like webinars and free conferences online, to share books, and articles, to motivate each other...in all honesty, I have never learned so much in my life!"*

Certainly, lifelong learning activities can take place through face-to-face teaching, E-learning (interactive conferences), E-learning for self-learning, and using social media (chat, forum, blog, etc.) [14] [9] [42]. It can be formal, such as refresher courses or training; informal, through self-training, tutoring, or peer learning, which is collective and participatory learning in the workplace and experience-based; and non-formal, through seminars, exchanges, discussions, and ideally through learning communities that support the evolution towards continuous learning, towards appropriate knowledge management and thus towards a perpetually learning organization [13] [12].

Lifelong learning is relevant to the professional activity of healthcare professionals working in hospitals with multiple patients [6]. Unfortunately, the transmission of knowledge in hospitals is often based on an oral tradition. A knowledge management approach is based on valuing implicit and explicit knowledge and ensuring that organizational memory is maintained by setting up knowledge storage media. The implementation of lifelong learning for the benefit of carers in a knowledge management approach will imply new working habits, new modes of exchange, sharing, and transfer, but also an evolution of the hospital culture towards a learning culture [7] [17] [30] [43]. The complexity of these settings is at its peak, with numerous, different, contradictory experiences and complex and abundant technologies and knowledge. This requires continuous learning development for agility, to enhance adaptability, to move toward learning hospitals, and to take good care of individuals and society [43].

#### **4.5. The obstacles to lifelong learning**

Lifelong learning ensures a balance between individual and collective competence building and contributes to professional development. This requires the creation of favorable conditions that can remove or reduce restrictive obstacles. A health professional confirms this (B 11):

*"Lifelong learning is necessary, but we must support and encourage healthcare professionals in this process by creating favorable conditions."*

Some of the health professionals interviewed expressed the need to learn. Moreover, some have taken advantage of continuous training sessions organized by their structures or are involved in university courses. That said, lifelong learning can be hindered by several obstacles, such as those related to the living situation, as confirmed by this healthcare professional (A 2):

*"...the learning moments I remember are those behind the desks when I was still at the training institute, which is quite a long time ago! Since then, I don't remember having been able to take advantage of a training course. I admit I have many gaps, but I don't know how! I have no one to look after my children. I would have liked to be able to learn during my shifts. Fortunately, I talk to my colleagues, which helps me learn a lot..."*

Family imperatives are indeed identified as a potential barrier to participation in training. Family burdens and responsibilities and childcare are situational barriers to be considered [44]. At present, ordinary workplaces need to be transformed into places of learning. This needs to be closely examined in the Moroccan public hospital, as an intense learning and training culture in the workplace makes employees more receptive to change, regardless of age [45].

On the other hand, other barriers are related to people's dispositions as the health professional (C 9) explains:

*"I'm retiring soon; I'm old to learn! I see them working and taking training courses, but their diplomas, even university ones, are never considered..."*

This confirms the age-related resistance to learning mentioned in several writings, without forgetting the essential conditions for doing so in adulthood, namely interest, and motivation [13]. Lifelong learning has no particular age and takes place throughout life. Learning needs will only change through the different stages of life and according to accumulated experiences. At the core of lifelong learning, education and training strategies focus on all aspects of a person's working life: updating professional skills, training, coaching, and counseling on making successful transitions from work to life [45].

For other health professionals, the distant impact of training undertaken as part of lifelong learning is a real obstacle, with one respondent (B 14) stating:

*"The truth is that learning just to learn is useless and not rewarding. Despite all our efforts, we do not consider our diplomas accumulated in the context of self-training or the continuing education courses organized by the Ministry. Or even our accumulated experience. I am ready to continue learning but want something in return, such as career development and, above all, my administrative and financial situation."*

In principle, lifelong learning should value all training undertaken and accumulated experience to provide opportunities for improving professional and personal skills. There is even a need to give more visibility to the importance of lifelong learning [12].

Other barriers to lifelong learning relate to lack of computer skills and lack of access to information, resource materials, technology, and finance, as explained by respondents (A 5) and (C 3)

*"To be able to engage in these activities, I first have to learn how to use a computer, buy one, and have an internet connection...I want to, but I don't have the means to do it at the moment..."*

*"Here, we are a bit cut off from the world...I don't get any materials to inform me about learning opportunities. I come, I work, and I leave."*

For other respondents, certain obstacles are related to the hospital organization regarding support, valorization, workload, fatigue, burnout, work schedule, etc. Respondents (C 1), (A 11), and (B 4) explain:

*"I don't have an easy time taking time off to train. There are not enough staff here."*

*"I can't concentrate anymore; I'm too tired to learn. I am exhausted, and my schedule does not allow me to train"*

*"What blocks me is that as long as it is not institutionalized, there is no accurate recognition for the training done in parallel with my work; it's a problem!"*

Indeed, among the obstacles declared to lifelong learning are the workload of healthcare professionals, tiredness linked to work overload, difficulties in accessing information, lack of documentary resources, lack of computer skills, lack of time, lack of financial resources, staff shortages, difficulties in accessing training, costs of attending training activities, precarious financial support from employers, inflexible and restrictive working hours, and lack employer support and backing [27] [40] [13] [12].

Indeed, moving towards lifelong learning requires an approach that will ensure healthcare workers have the time and support to learn and update their skills throughout their careers. This means removing barriers to participation, widening access to learning and making it equally available to men and women, and providing opportunities for upgrading [46].

This study makes it clear that the desire to improve the quality of education for healthcare professionals is sustained, given its historically continuous evolution in Morocco. Today, only a quarter of the healthcare workers interviewed knew what lifelong learning is as a concept. But, respondents generally recognized the importance of learning to develop their skills and improve their practice. For them, constant training is essential during prolonged uncertainty and iterative change in Moroccan public hospitals. Moreover, several forms and activities of lifelong learning are concrete and implemented by caregivers. This depends mainly on the individuals, their life situation, readiness to learn, access to information, technological and financial means, and above all, the support of the hospital organization and working conditions within it.

This argues that the development of lifelong learning can only flourish if an explicit system is put in place to structure this. A system that organizes and values all forms and activities of learning consists of the allocated time, budgets, and a sustainable support framework [47]. Developing an explicit system of lifelong learning for the benefit of carers within the framework of a knowledge management approach will be better because it will guarantee hospital performance and, therefore, improve the quality of care. Among other things, when we know that a hospital organization can only be efficient if it succeeds in setting up mechanisms to develop collective knowledge by cross-fertilizing individual knowledge [48]. This is without forgetting that organizational culture and a supportive environment are a prerequisite for learning; attitudes and motivation are necessary and reflect the professional values of healthcare professionals. The presence of barriers to lifelong learning is expected, and their impact on practice is real. Lifelong learning is fundamental for the caregiver and is considered necessary for improving the quality and safety of patient care [6].

In short, the Moroccan hospital is constantly evolving with its healthcare workers. More than ever, there is a clear need to continue improving the quality of training for healthcare workers by building an explicit system of lifelong learning for these professionals. Their role in implementing any change is vital, and learning is an essential strategy to support them and optimize their productivity. Recognizing and using their skills is also necessary for validating prior learning or competence assessments [49]. This will increase their motivation and enhance the value of their contribution to the hospital and society. Finally, forging a culture of lifelong learning will bring about a strategic revolution in human resources and match the skills and requirements of work in the Moroccan public hospital, which will become a learning hospital.

**Limitations of the study:** This study has some limitations. The availability of relevant historical data limited the historical analysis, and some issues related to the subject of the study were not exhaustively addressed, such as barriers or the learning culture within Moroccan public hospitals, which significantly favors continuous learning and encourages

the acquisition of new skills. Further exploration and analysis can be undertaken in this regard.

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## 5. Conclusion

The health system in Morocco is currently in a conclusive phase of its existence, given the depth of the imminent overhaul of the health sector. The role of the public hospital and its human resources in bringing about the desired transformations is no longer to be demonstrated or overlooked. Moreover, the improvement of the performance of the hospital establishment depends essentially on the skills and motivation of the health professionals who work there to provide quality care and ensure optimal follow-up and safety during their services.

The starting point for promoting this is establishing an efficient training system. In this sense, particular attention has been paid for several years to improving this training system, which should produce sufficient healthcare personnel with the skills and abilities required to meet the population's evolving needs. Moreover, lifelong learning is one of the most effective ways of motivating and retaining human resources while maintaining them at an optimal level of competence. It will help to meet the challenges of scientific and technological developments to meet the new health needs of communities.

Today, only a quarter of the caregivers interviewed understand what lifelong learning is as a concept. But they all consider continuous learning essential during prolonged uncertainty in Moroccan public hospitals. However, several forms and activities of lifelong learning are concrete and implemented. This depends mainly on the people, their life situation, readiness to learn, access to information, technology, and financial means, and above all, on the support of the hospital organization and the working conditions at its level.

Lifelong learning should become an official requirement for healthcare workers to be oriented toward it. And structuring it while integrating it into a knowledge management approach will promote the optimal use of accumulated knowledge. Lifelong learning can provide a basis for more effective career development. It is an essential component of the development of health professional education. It aspires to positively impact health professionals and their practices, healthcare facilities and their performance, and patient satisfaction and health.

This research provides a good and more accurate overview of lifelong learning among healthcare workers. It also initiates reflection and debate on health professionals' need for lifelong learning, and it's a real opportunity to raise awareness about structuring lifelong professional training while integrating a knowledge management approach.

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