



## Clinical Supervision of Medical Students in Primary Health Care Services: General Practitioners' Perspectives in Morocco

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### Abstract

**Introduction:** Clinical supervision is crucial to establish a learning climate in which the supervisor guides the supervised. Clinical supervisors might have numerous barriers and motivations. Our study aimed to explore the clinical supervision practices among general practitioners and to describe their motivations, barriers, and needs.

**Methods:** A qualitative study was conducted using purposive sampling which is a non-probabilistic sampling method. The population was the general practitioners who were working at the primary health care centers either in the public or the private sectors (N=16). Individual semi-structured interviews were conducted by two authors, using an interview guide. All interviews were recorded, transcribed, and coded. A thematic content analysis was done manually based on an inductive approach.

**Results:** Sixteen general practitioners participated. Three main themes emerged from the study: 1) General practitioners' practices in clinical supervision, 2) the enablers to adequate clinical supervision in general practice, and 3) the general practitioners' fundamental barriers and needs in clinical supervision. Despite their lack of clinical supervision training, they could describe the different clinical supervision steps without giving their exact names. We found that their teaching skills must be reinforced. General practitioners were mainly motivated by personal and professional interests as well as moral obligations. Numerous barriers and needs were identified at the organizational, relational, and financial levels. The principles barriers and needs were the lack of clinical supervision training, lack of equipment, and remuneration.

**Conclusion:** The current study highlighted the motivations and challenges of general practitioners concerning clinical supervision. These results are helpful for all responsible institutions involved in clinical supervision and upcoming programs in Morocco.

**Keywords:** Clinical supervision, Primary health care, General practice, Rotations

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## Introduction

Halsted's model of "see one, do one, teach one" is one of the most usual learning methods in surgical training. This model involves the learners both physically and mentally, especially when their "hands are on". They learn and explain at the same moment, consequently, they will remember every minutia. However, this traditional model has been criticized because it engages patient safety leading to an increased medical mistakes rate. Then, Halsted realized the new learning method's necessity which was the clinical supervision model. This model was introduced and generalized in 1990 to healthcare professions as one of the most successful models of learning (1, 2).

Clinical supervision is a multifaceted pedagogic strategy that has numerous definitions. The common definition is a structured educational intervention where the highly experienced person known as "supervisor" leads and guides another individual, "student" or "supervised", who is the less experienced person based on mutual respect and trust. Consequently, the supervisor must be qualified; for instance, he must have many high competencies in the taught field, well-developed communication skills, leadership, and professionalism (3). Clinical supervision aims to improve personal, and professional growth, and development and to ensure the patients' safety. Currently, it is an expanded method in healthcare professions including general practice and paramedical care (4-6).

Although clinical supervision is considered an additional job for general practitioners (GPs), it can be considered a demanding activity and sometimes extremely laborious. It is generally known as a time-consuming intervention. It involves more human resources. It needs supervision skills and requires basic pedagogic as well as clinical equipment. Financial support is also needed (4, 7). It is crucial for empowering professional development. Indeed, it helps to update their knowledge and skills, to promote their job satisfaction, their well-being at work, and to deal with demanding situations. GPs are involved in various responsibilities in primary health care as well as play many roles in clinical supervision. So, they are simultaneously GPs, teachers, coaches, evaluators, trainers, facilitators of the learning process, and professional role models.

In addition, the rotation in general practice is a golden opportunity for medical students to have experience in work front line of the healthcare system, understand the follow-up of chronic diseases, develop communication skills with patients as well as the different

healthcare professionals, promote the general practice, to develop the student's professional sense responsibility and to enrich their clinical experience. Furthermore, clinical supervision is influenced by the relationship between the supervisor and the supervised. As proof, high-quality clinical supervision requires a positive relationship between supervisor-supervised, which surely promotes self-motivation, learning activities, and skills for both (4).

As in other countries around the world, in Morocco, GPs have been playing a fundamental and vital role in promoting clinical supervision at primary health care services. Clinical supervision needs specific and continual pedagogic training. Nevertheless, many Moroccan GPs have not received any pedagogic training yet while there is an increasing number of medical students yearly. The escalating annual influx of medical students starkly contrasts a low general practitioners (GPs) ratio, specifically 7.1 GPs per 10,000 inhabitants in Morocco. Moreover, there is absence of a legally mandated framework for overseeing clinical supervision in primary healthcare centers exacerbates this situation (8).

General practice supervisors are the cornerstone of undergraduate and postgraduate clinical education (9). In Sweden, primary healthcare centers face several challenges in balancing the growing demands for service and clinical supervision with the learning activities for a growing number of medical students. Effective clinical supervision and learning environments can be facilitated by enhancing communication between medical schools, managers, and supervising physicians as well as incorporating faculty development into daily clinical work (10). Effective clinical supervision during general practice rotations is strongly linked to instructional quality and affects both the patient and medical students (11).

On top of that, in Morocco, clinical supervision will be useful for the ongoing family medicine project. Primary health care services cover %90 of the population's health problem requests (12). Its main actors are the GPs of primary health care services. For this project, family practitioners' education will be assured at the primary health care centers by clinical supervisors. These clinical supervisors must be qualified general practitioners and have clinical competencies including theoretical and practical aspects (13). Therefore, there is a need to explore the GPs' pedagogic practices, motivations, barriers, and needs to provide insights for the upcoming clinical supervision program in general practice, especially, when the Family medicine specialty

will be implemented eventually in the Moroccan healthcare system according to the new medical reform (14). To succeed the clinical supervision in primary health care in Morocco, it is necessary to hold a state-of-the-art view about it. Our study aimed to explore the clinical supervision practices, motivations, barriers, and needs among GPs at primary health care in Morocco.

## Methods

### *Study design and population*

A qualitative study was conducted from 24th of January to 22nd of March 2022 among GPs in Morocco according to Consolidated Criteria For Reporting Qualitative Research COREQ reporting guidelines (15). It is a checklist of 32 items used either for interviews or focus groups organized in three domains: 1) research team and reflexivity, 2) study design, and 3) data analysis and reporting. Maximum variation sampling, a type of purposive sampling was used to have diverse profiles based on different sociodemographic and professional characteristics including age, gender, exercise sector, and clinical supervision training. GPs who worked in primary health care were included. Those with purely administrative positions such as regional direction was not included.

### *Data collection*

Two investigators conducted sixteen individual semi-structured interviews using a standardized interview guide with open-ended questions, based on the literature review (16-18). A learner-centred approach is recommended. There is also a trend towards workplace-based learning outside of the hospital setting. In Australia, this has resulted in an increased need for General Practitioner (GP). The interview guide covered three categories: 1) The pedagogic practices in clinical supervision and the GPs' teaching practices while supervising medical students, 2) The enablers and barriers to effective clinical supervision in general practice, and 3) The GPs' basic needs in clinical supervision.

We started the interview with a short presentation of the interlocutor, with a brief introduction about the subject of the study. Then, we asked different questions from the interview guide. Finally, we gave a spontaneous space before ending. The interviews were done online via Zoom® and Google Meet® with a median duration of 16.7 minutes with extremes from 09 to 29 minutes. The process of collecting data persisted until the data were saturated and no emerging categories could be identified. All interviews were recorded, transcribed, and validated for accuracy.

### *Data analysis*

A thematic content analysis was done manually according to an inductive approach (19). Transcripts were encrypted using numeric codes to preserve the anonymity of each participant. The coding phase and data extraction were done independently by two investigators. Discrepancies were resolved by discussion between the different investigators.

### *Validity and reliability of data*

The use of Lincoln and Guba's criteria in qualitative research is for assessing the quality of the research data (20). While assessing the rigor of qualitative research, these criteria are frequently applied. To guarantee the credibility of data, long-term experience in medical education, peer review, and setting up communication with participants were taken into account. To confirm that dependability, an outside expert who was not directly engaged in the study examined and evaluated the data and research methodology. To be sure of confirmability, we fully wrote the study process with a clear and explicit description. To guarantee transferability, an expert double-checked the study's procedures and the code extraction procedure.

### *Ethical requirements*

The study was conducted according to the ethical Declaration of Helsinki principles. The anonymity and confidentiality of data were respected. All GPs gave informed oral consent to participate and to be recorded during the interviews. All GPs were informed of the study objectives and also their right to withdraw at any moment. All the recorders were deleted after finishing the analysis. Dahir n°1-15-110 du 18 chaoual 1436. (4 aout 2015) portant promulgation de la loi n°28 – 13 relative à la protection des personnes participant aux recherches biomédicales. Available from: <https://www.sante.gov.ma/Reglementation/REGLEMENTATION/DESPRATIQUESMEDICALES/28-13.pdf>.

## Results

Sixteen GPs participated in the study. The majority were females (68.7%) with a median age of 48.8 (10 years). They worked mostly in urban areas, in the public sector, and had previous experience in clinical supervision (81.2%). However, nearly three-quarters had not received any clinical supervision training (68.7%). The majority of GPs had received their training in general medicine in Morocco except for two who had studied in Tunisia and France (Table 1).

Four themes and ten subthemes were explored from the manual thematic analysis (Table 2). These themes were related to practices, supervisors' motivations, barriers, and needs.

**Table 1:** Socio-demographic and professional characteristics of participants

	Effective	Percentage (%)
Age (years)	48.5 (10)*	
Seniority of exercise in general practice (years)	20 (28)*	
Gender		
Female	11	68.70
Male	05	31.20
Region		
Marrakesh-Safi	04	25.00
Rabat-Sale-Kenitra	04	25.00
Casablanca-Settat	04	25.00
Tanger-Tetouan-Al-Hoceima	03	18.70
Oriental	01	06.20
Sector		
Public	13	81.20
Private	03	18.70
Exercise area		
Urban	13	81.20
Rural	03	18.70
Clinical supervision training		
Yes	05	31.20
No	11	68.70
Community health/Family health Master's Degree		
Yes	07	43.70
No	09	56.20
Clinical supervisor		
Yes	13	81.20
No	03	18.70

\*Median (range)

**Table 2:** Themes identified with the thematic analysis

Themes	Sub-themes
General practitioners' perceptions.	1. General practitioners' perceptions difference between public & private sectors. 2. General practitioners' perceptions about the relational aspects.
Clinical supervision practices.	3. Clinical supervision steps. 4. Assessment for medical students.
General practitioners' motivations for exercising the clinical supervision.	5. Intrinsic motivations (personal interest, scientific interest...). 6. Extrinsic motivations (remuneration, experiences...).
Associated barriers and needs to clinical supervision.	7. Organisational and administrative levels. 8. Relational level. 9. Financial level.

### Theme 1: The GPs' Perceptions Toward the Clinical Supervision Concept

#### Sub-theme 1: General practitioners' perceptions of the difference between public and private sectors

The GPs' perceptions were different based on the public and private sectors of work (Figure 1).

Clinical supervision for GPs in the public sector is considered a fundamental factor for the development of the Family medicine project, the key success of the healthcare system as well as the young medical doctors' training. Clinical supervision promotes exchanges between the general practitioners as "supervisor" and the medical students as the "supervised," allowing

knowledge transfer between both. It is a suitable moment for training, evaluation, and self-criticism for both GPs and students to improve their competencies. Five out of the 13 GPs declared:

*"Clinical supervision can only be a lever to improve our way of doing things and can also be a way of self-criticizing doctors to review their way of working" (N3).*

Nonetheless, the GPs in the private sector (2 out of 3) were unaware of the existence of the clinical supervision concept in primary health care as they thought it only existed in tertiary health care or outside Morocco. Besides, they declared the absence of a legal or administrative

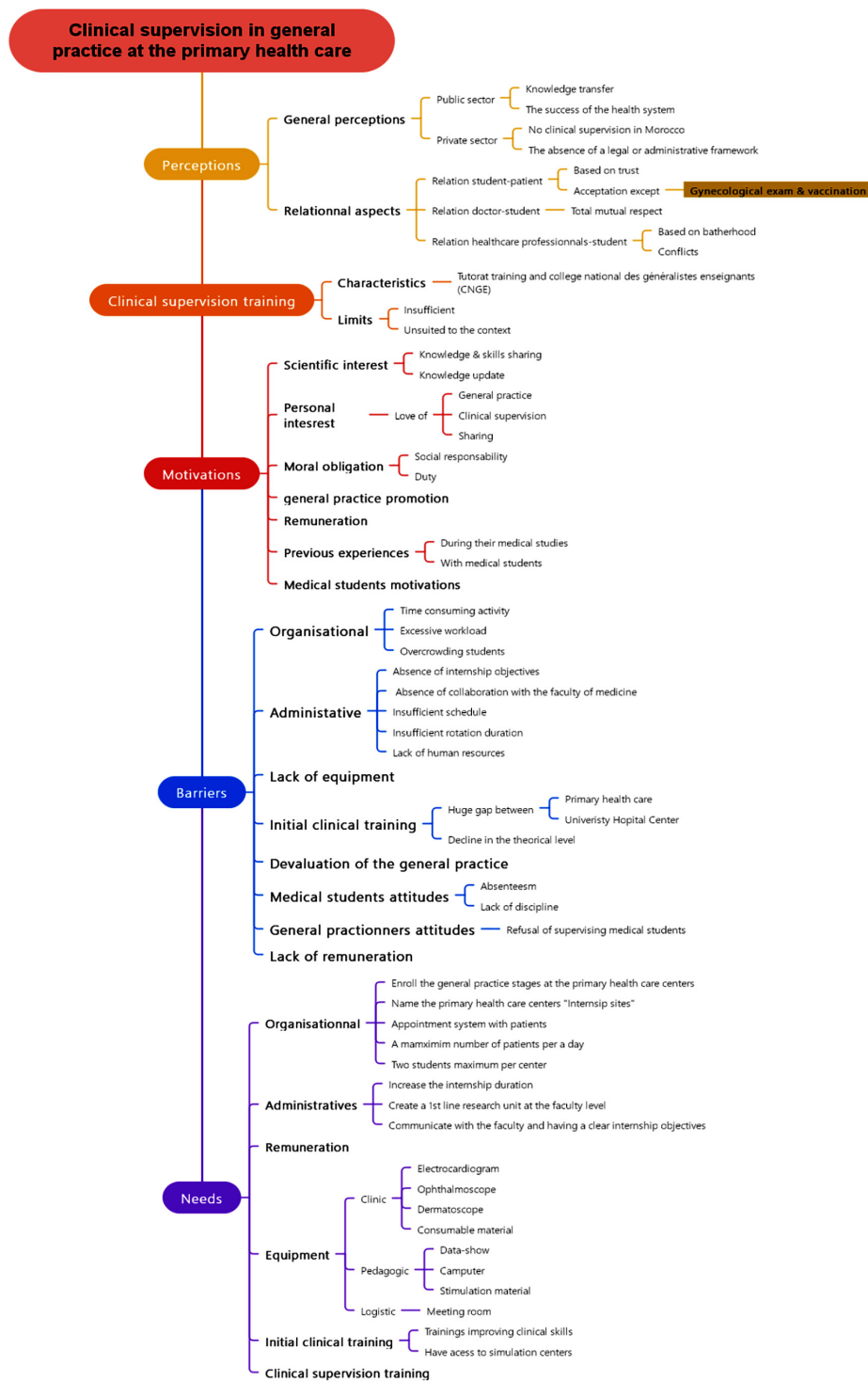


Figure 1: Mind mapping of all the identified themes

framework governing this practice. The clinical supervision development in the private sector will allow GPs to expand training grounds and teach the medical students how to run a general practice office.

*“In Morocco, there is no defined function of clinical supervision. No legal or administrative framework allows private GPs to perform this function. I believe that clinical supervision is a*

*kind of icing on a cake that does not yet exist” (N2).*

*Sub-theme 2: General practitioners’ perceptions about the relational aspects*

Concerning the relational aspects, among GPs who received medical students, it was declared that the student-patient relationship was built based on trust, mutual respect, communication,

and acceptance. Patients consider the students as future GPs in a learning phase. There was unwillingness from the patient and sometimes a total refusal for two main reasons: 1) being a male medical student with a female patient who consulted for a gynecological examination, 2) and the same situation when consulting for vaccination.

*"They (the patients) know they are students... They trust them and are seen as doctors. There is no problem either in the interview, examination, or medical prescriptions. They respected the patients and were respected by the patients" (N11).*

Secondly, the GP-student and the healthcare professionals' relationships were based on mutual respect in a medical brotherhood context.

*"It is a brotherly relationship between brother and brother with total respect" (N10).*

### Theme 2: Clinical supervision practices

Among GPs who received medical students, GPs could describe the different steps of clinical supervision without giving the exact name of each step despite their lack of clinical supervision training. Observation, direct supervision, and explicative discussion around a case were the most cited practices. For the medical students' assessment, there was no final exam for medical students (Table 3).

### Theme 3: The GPs' motivations for exercising the clinical supervision

#### Sub-theme 1: Intrinsic motivations (personal

interest, scientific interest...).

All the GPs were motivated to be or to continue exercising as clinical supervisors. The main motivations were professional and personal interests as declared by half of the general practitioners; the majority of supervisors taught because they enjoyed the teaching activity or sharing and updating their knowledge.

*"It is about the love of the job first, and then the need to share" (N10).*

GPs perceived that being a clinical supervisor was a part of their responsibility and a moral obligation in the medical profession, specifically to the discipline of general practice. This responsibility was explained by the Hippocratic Oath or by some religious aspects.

*"It is a responsibility to supervise young medical students" (N2).*

#### Sub-theme 2: Extrinsic motivations (remuneration, experiences, ...)

Among the extrinsic motivations mentioned by GPs are their own experiences during their studies as well as their positive supervising experiences.

*"I had a great experience with a doctor. She was very kind, empathetic, she gave us everything and I was extremely happy with this experience" (N9).*

Financial remuneration was not the less mentioned motivation; it was declared by one quarter only.

**Table 3:** Clinical supervision practices

Main categories	Generic categories	Additional information	Representative verbatims
Clinical supervision steps	Observation	It was the first step in clinical supervision, where the student observes the various activities, without any interaction.	<i>"At the beginning of their stages, they are spectators". "They assist, they hear but they do not intervene".</i>
	Direct supervision	It was the second step after observation, where the student does an activity in the presence of his supervisor.	<i>"Four weeks later, the medical student does the consultation in front of me".</i>
	Indirect supervision	It was the last stage during the rotation, where the doctor feels that the student has assimilated his clinical skills well. The supervisor is absent physically.	<i>"It's the last half of the rotation, that is to say after we notice or observe the behaviour of the student, the level of knowledge and we give them a free hand to deal with the cases that seem easy and manageable".</i>
	Collaborative approach	This is a phase where the doctor and the student work together to make a diagnosis or prescribe a treatment.	<i>"We make the diagnosis together and the treatment together, so it is...".</i>
Rotation validation	Explicative discussion around a case	It is a question-answer stage formulating a discussion around a case, or a diagnostic difficulty, discussion through a presentation. This discussion took place after the end of the activity in the absence of the patient.	<i>"But always after each patient, there are discussions of questions and answers on the pathology, how to behave, the medical prescription, communication...".</i>
	Assessment	The total absence of a final exam for the student either during their rotations or at the end, the students finally, are noted on their attendance and on their presence.	<i>"There is no final exam, the assessment is based on attendance only".</i>

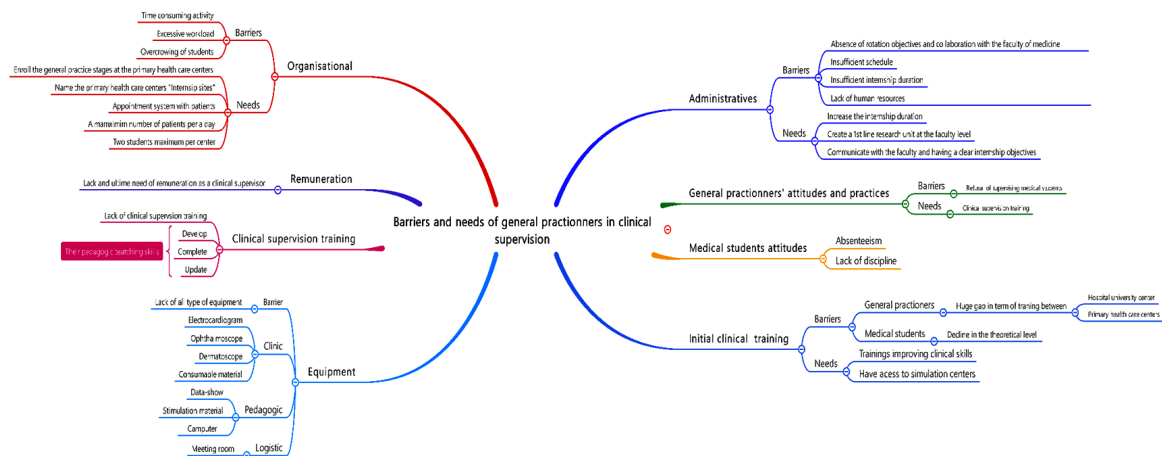


Figure 2: Associated barriers and needs in clinical supervision

*“The GPs are motivated because remuneration was included in our base salaries” (N6).*

Medical students’ attitudes and their degree of interest influenced the clinical supervisors’ motivations.

*“If a student is motivated, we get more motivated, too” (N15).*

#### Theme 4: Associated barriers and needs to clinical supervision

All the GPs declared the existence of extrinsic barriers, which are sources of their needs in terms of clinical supervision either at the organizational (Lack of equipment, lack of clinical supervision training), relational (medical students’ absenteeism and lack of discipline), and financial level (remuneration). These different levels represent the sub-themes (Figure 2).

##### Subtheme 1: Organisational and administrative levels

To begin with the organizational level, there are many barriers and needs declared. Firstly, the clinical supervision was judged as a time-consuming activity that extremely increased the workload. In addition, there were plenty of medical students per center. An insufficient schedule and duration were also reported. The GPs also reported a lack of human resources; there are few clinical supervisors with no collaboration with the school of medicine about the rotation’s objectives.

*“Clinical supervision is very time-consuming” (N16).*

They needed: 1) to improve their communication with faculty around the rotation’s objectives, 2) to increase the rotation’s duration with enforcing a restriction on rotation, with a maximum of two medical students allowed per center, 3) to set up an appointment system with a

maximum number of patients per day, and 4) to develop a research unity for the primary health care at the faculty.

Secondly, there is a lack of clinical supervision training during the GPs’ practices. Their practices were essentially based on experience with medical students. They declared that they had a constant need to develop, complete, and update their teaching skills. Thirdly, the majority had declared the lack of and the need for equipment, such as clinic equipment (electrocardiogram, ophthalmoscope...), pedagogic equipment (data-show, computer, simulation material, meeting room...).

*“We would still like to have training in pedagogy... We miss it. What we have done so far is through experience, successful experiences, but we would like to have pedagogical courses” (N7).*

*“We need a health care center that can receive students, which is equipped and has staff who have the educational skills to teach” (N15).*

##### Subtheme 2: Relational level

At the relational level, many GPs declared that the absenteeism and lack of discipline of medical students were barriers to achieving the rotation’s objectives. Some GPs may refuse to supervise medical students due to their lack of teaching skills.

*“Given the remoteness of students from rural areas, it exceeds 30 km, they come intermittently 2 days a week; it’s not enough... the intern must be involved, interact with the team, and exchange knowledge” (N7).*

##### Subtheme 3: Financial level

Finally, at the financial level, there was a current lack of remuneration and it was declared as an final need to practice clinical supervision.

*“We are not remunerated in this sense, there is no remuneration” (N4).*

## Discussion

This study aimed to explore the clinical supervision practices among GPs, their motivations, barriers, and needs in terms of equipment or pedagogic training. GPs have mainly intrinsic motivations such as personal, and professional interests and moral obligations. The principal barriers, and needs were extrinsic such as equipment, organization, and lack of clinical supervision training.

The motivation of being a clinical supervisor was mainly driven by intrinsic motivations including the personal and professional interest as well as the duty or obligation more willingly than remuneration or any economic incentives. The Australian clinical supervisors were primarily motivated to update their knowledge and also to learn new aspects from junior colleagues represented in our study by professional interest (21). The Canadian clinical supervisors were mobilized by having a sense of duty and personal interest including appreciating the contact with students, enjoying teaching, and feeling motivated to give something back (22). Among the motivations to continue teaching German family physicians, the interest in transferring knowledge is the highest value closely followed by the desire to improve medical education, to take responsibility for teaching, and to update their medical knowledge (23). Regarding our results, the financial rewards were not a motivation for general practitioners. However, it was considered a sort of barrier to being a clinical supervisor.

There are multifarious barriers for the GPs at the organizational, relational, and financial levels. 'No enough time!' is the most consistently declared barrier to undertaking clinical supervision at the organizational level (24-28). The lack of physical space and the increase in clinical workload were the most cited barriers by GPs in the United States. The GPs declared that they felt physical distance and poor communication in the medical school (27). At the relational level, concerning Canadian and Sweden studies, the unwilling and the unmotivated students were the top barriers to clinical supervision (24, 29). In the United States, mismatched expectations between supervisor-supervised as well as a lack of available mentors have been described (25). Thus, the same barriers have been described in our study and in the literature, too. Nevertheless, Moroccan GPs declared a lack of clinical supervision training.

Over time, clinical supervision has been practiced incompetently in the clinical practice field (30). Therefore, several studies highlight the need for clinical supervision training for effective supervision. The lack of clinical supervision

training leads to an inability to communicate with medical students, the inability to cope with unwilling medical students, and the inability to manage different personalities (4, 31, 32). Many clinical supervisors in Switzerland were declared incompetent to a lack of communication skills as well as the lack of general teaching skills (33). Consequently, clinical supervision training is undoubtedly required. There is also a need to update their basic clinical skills including the management of chronic diseases, ultrasound, and the techniques of emergency and first aid field (34).

This study has both pros and cons. The qualitative approach has been used to explore in depth our subject and give reliable and reproducible results. This is the first study in Morocco that deeply investigates the clinical supervision of primary health care either in the public or private sector at a national level. It provides a basis for future studies in this field. This study intended to improve the educational system of medical studies in primary health care, especially at the beginning of the Family medicine project. Purposive sampling was used to have diverse profiles and to enhance the sampling's diversification. Unfortunately, not all the twelve Moroccan regions were included.

In light of our results, many recommendations can be established. The first step is to edit a legal framework defining the clinical supervisors' roles, responsibilities, and rights by the responsible institutions. In the second place, it's necessary to set up well-equipped university primary health care centers to make the whole population aware that medical students will be at these centers. In the third place, clinical supervisors must be trained in communication, teaching, and pedagogical skills according to the Moroccan context as well as the rotation objectives (33). Many GPs might refuse to be clinical supervisors due to the lack of remuneration. Therefore, remuneration is a crucial factor in motivating general practitioners. The family practitioners must be trained in primary health care services. Also, we recommend a rotation for at least one month for all medical students in the university's primary healthcare services (28) family physicians (FPs). The private sector has to be involved in the clinical supervision program to expand the rotations' grounds. In the meantime, a worthwhile fund investment from governments as well as from the health and education ministries is required to invest, promote, and succeed the clinical supervision in primary healthcare services (34).



## Conclusion

Clinical supervisors have crucial roles in medical students' education. In Morocco, there is an urgent need to reinforce their clinical and teaching skills. Multiple barriers and requests were identified. Motivational factors must be strengthened. Healthcare authorities' help is required from now onwards to ensure a sustainable clinical supervision program. Other studies are required to be conducted to identify the associated factors of general practitioners' interest, and explore the relationship of supervisor-supervised. Interventional studies can also help assess the clinical supervision program when it is implemented.

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## Authors' Contribution

All authors contributed to the discussion, read and approved the manuscript and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated resolved.

## Conflict of Interest

The authors declare no conflicts of interest.

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