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The experiences of medical trainees about core components of clinical supervision functions: A qualitative study in Iran

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Abstract

Background:

Attending physicians must holistically consider medical trainees, must not expect trainees to abide by several laws and regulations, and other aspects as individuals should not be overlooked. Current supervision doesn't meet the needs of medical trainees.There is an agreement in the works of literature that clinical supervision has three functions, which include managerial, educational, and supportive.

Objectives:

The current study aimed to explore the core components of clinical supervision functions as perceived by medical trainees .

Methods:

This qualitative study was carried out using a directed content analysis. Purposive sampling with maximum variation was used to select the participants from medical trainees in teaching hospitals of Hamadan University of Medical Sciences. A semi-structured interview was the main approach to data collection. Saturation was achieved after interviewing 13 participants.

Results:

In this study, eight categories were extracted from interviews. Includes irregularity in the clinical settings, establishment of discipline, and clinical educator as a teacher, conflict resolution, improving resilience, peer support, professionalism, and Observance of patient's rights.

Conclusions:

This study highlights important areas where functions of clinical supervision need improvement in order to maximize their benefit to the medical trainees. Therefore, all three supervision functions should be simultaneously applied for being a qualified doctor by an attending physicians (APs).

Keywords: Clinical Supervision; Medical Trainees; Support; Directed content analysis.

Introduction

Supervision is a fundamental management activity in human resources. Supervision can be focused on development or performance, or both (1). Supervision, providing guidance and feedback on issues related to personal, professional, and educational development in the field of trainee experience to provide safe and appropriate care for patients (2). Undergraduate Medical Education (UGME)

consists of two basic medical and clinical sciences courses. The term clinical education refers to the acquisition of supervised professional skills. The clinical learning environment has complex and multidimensional characteristics (3). Factors that influence the clinical learning environment include educational goals, learner characteristics, clinical teaching environment, teacher characteristics, availability of facilities and equipment, employee cooperation, the existence of supervision, and evaluation system (4). clinical supervision in teaching hospitals requires further evaluation and progress but is not as effective (5). The principle of supervision in education, but sometimes pastoral care is essential, especially when trainees have a crisis in their personal or professional lives (1).

Studies have shown that trainees are concerned about their uncertain future careers, unrealistic increases in a medical capacity,(6, 7) lack of knowledge and skills, and attending physician's criticism of trainee activity (8). Based on the evidence, it has been demonstrated that high levels of stress and anxiety during medical education may reduce trainees' attention span, impair trainees' decision-making skills, and lessen students' ability to effectively communicate with patients.(9) By creating a supportive educational environment in clinical settings, a positive clinical learning environment can be prepared for trainees and the groundwork can be laid for them to improve their clinical competencies (10). It is essential to achieve supervision goals such as ensuring patient safety/care, trainee teaching, upgrading high standards, identifying trainee problems, supporting trainees, and supervision trainee progress (2).

There is an agreement in the works of literature that clinical supervision has three functions. These functions are reflected in professions, such as nursing (11, 12), and social work (13) which are recommended to use in medical professions (2, 14). The models dividing the functions of clinical supervision are as follows: educational, supportive, and managerial (13), formative, restorative, and normative (15), developmental, resource, and qualitative (16). Bernard's (2014) also identifies three purposes of supervision, two of which similarity to the normative (i.e., monitoring the quality of professional services and serving as a gatekeeper) and one with the formative objective (i.e., improving professional functioning) (17). Educational/formative/developmental function with emphases on learning and teaching. Supportive/restorative/resource function is the emotional reaction of supervisors. Management/normative/qualitative function is related to the responsibility of the clinical function of supervisors and clinical results to confirm ethical quality services (18).

It is apparent that the managerial/administrative role is much more extensive, mostly including assuming responsibilities to trainees and ensuring that they have conformed to rules and norms of organizations. It seems that two educational and supportive roles have faded or disappeared due to managerial roles.The current study aimed to explore the core components and characteristics of clinical supervision functions as perceived by medical trainees.

Methods

Design and Participants

A qualitative content analysis (QCA) was utilized as the research design. This study was carried out using directed content analysis in which there are models about the phenomenon under study that helps validate or expand the concept of clinical supervision.

This study was performed at the Hamadan University of Medical Sciences in the west of Iran. Medical trainees were selected by purposive sampling which continued until the saturation of the data. The participants included eight medical interns (in internship course), five medical clerks (in clerkship or externship course).

Data collection

Data collection was performed using semi-structured interviews. A guide to open-ended interview questions was used following the predetermination of themes. In the beginning, interviews started with the over-all open questions as follows:

What is your experience with AP supervision of your clinical practice? Did you have any experience in which you did not feel supported by the AP? Open and probing questions were asked during the

interviews. The interviews were recorded based on participants' willingness and readiness by a digital recording device. Each interview lasted from 34 to 56 minutes with an average of 40 minutes. All interviews were recorded and transcribed verbatim on the first occasion.

Data analysis

According to the directed content analysis process, at the beginning of each interview, the audio file was carefully transcribed and the text of the interview was read several times to analyze the data. The texts were returned to the participants for comment and correction. Later, important statements were highlighted to detect the initial codes or meaning units that exist in the interview text. In the next phase, similar meaning units were placed in the themes of management, educational, and supportive supervision. All the interviews were analyzed by two independent researchers.

Trustworthiness

Prolonged engagement methods were used to ensure the collection and analysis of trainees' actual experiences. The extracted texts of some of the interviews, codes, subcategories, and categories were given to three faculty members of the school of nursing (qualitative study researchers) for the evaluation of the agreement reached on the meanings among several researchers. The maximum variable sampling (including age, gender, and clinical phase) was used to make it possible to fit or transfer the results to other fields.

Ethical considerations

Data collection was carried out after the approval of the research proposal and receiving permission from the Ethics Committee of Shahid Beheshti University of Medical Sciences (IR.SBMU.SME.REC.1398.061 Date: 2019-07-06). At the beginning of the interview, the interviewer introduced him/herself to the interviewees, explained the goals of the research, and obtained informed consent.

Results

This qualitative study was carried out on 13 medical trainees (Table 1). Three themes from the investigation of clinical supervision models, including management, educational, and supportive supervision, and the fourth theme from participants' initial codes were observed to be the institutionalization of professional ethics (Table 2). The components were broken down into managerial supervision, educational supervision, and supportive supervision. It should be noted that these three functions were challenging as they were not all mutually exclusive and a degree of overlap was inevitable.

Table 1. Demographic Information of the Participants

Participant Code	Age (year)	Gender	Semester	Phase
1	25	Male	13	Internship*
2	24	Female	11	Clerkship
3	26	Female	14	Internship
4	26	Male	14	Internship
5	28	Female	14	Internship
6	27	Male	15	Internship
7	23	Female	11	Clerkship
8	26	Female	13	Internship
9	24	Male	12	Internship
10	23	Male	10	Clerkship
11	25	Female	13	Internship
12	22	Female	10	Clerkship
13	24	Female	10	Clerkship

* The educational phases in the IRAN (basic science courses, pre-clinical, clerkship and internship periods)

Table 2. A summary of the theme, categories and related subcategories based on the medical trainees' points of view

theme	Categories	Subcategories
Management Supervision	Irregularity in the clinical settings	Reduction in clinical education hours
		Multiple visits from patients
		Unfamiliarize with the structure of clinical education
	Establishment of discipline	Encouragement and punishment's system
		Monitoring and following up the teaching performance of APs and educational programs
Educational Supervision	Clinical educator as a teacher	Strengthen teaching and learning methods
		knowledge-based tests
		Organizing overcrowded rounds
		Need-based supervision
	Conflict resolution	Educational Justice
		Distinguish between teaching and therapeutic roles
Supportive Supervision	improving resilience	Emotional Support
		Instrumental Support
	Peer support	Residents
		Classmates and senior
Institutionalization of Professional Ethics	Professionalism	Responsibility
		Professional ethics in residents
	Observance of patient's rights	Patients' safety
		Observance of the plan of conformity

The following sections explain the categories extracted from the interviews:

1. Management supervision

The trainees' experiences were divided into two categories

1.1. Irregularity in the clinical settings

Holding theoretical lesson classes during clinical hours makes the clinical learning setting irregular. An experienced medical trainee used the term messy when he was explaining the irregularity in the clinical setting. The trainee (2) said, "Theoretical classes are held during the clerkship course at the hospital, which decreases the number of hours spent at the patient's bedside and the lack of regular visits from patients by APs, residents, and trainees make clinical education messy and less important".

The lack of a program to familiarize trainees with the structure of clinical education can confuse trainees when they enter the hospital. The trainee (1) commented, "In the basic science, the classes were regular, but the clinical education was not regular. It was very difficult for us, and we were more stressed".

1.2. Establishment of discipline

The trainees emphasized that the school should have guidelines and frameworks for punishment and should be commensurate with the type of negligence and error. This trainee (13) stated, "He gave me an extra on-call shift because I left a note. I think the extra on-call shift is illegal. He should have acted differently".

Another trainee (6) said, "Excessive trainee's activity should be considered to appreciate trainees' good performance".

According to the trainees' experiences, it is necessary to monitor and follow up the performance of attending physicians and educational programs. The trainee (12) stated, "The administrator of education visits the clinical settings each semester to monitor the performance of the departments and ask if

clinical educators teach these matters to trainees. I did not want to answer because I know from experience that nothing happens after monitoring it, and the same situation continues".

2. Educational supervision

This theme includes two categories

2.1. Clinical educator as a teacher

The trainees mentioned that training courses are required for non-faculty physicians, residents, and a few faculty members. The trainee (5) said, "Many non-faculty members and residents do not have the ability to provide information in an arranged and organized way and do not assess the trainee based on their real Competencies".

The trainees described desirable teaching methods from their points of view.A trainee (11) said, "In one of the clinics, the attending's method was very good Talk to this patient now. What are her/his symptoms? Find them out and tell us what to do. The questions s/he asked the residents and interns were commensurate with their level".

The trainee (10) said, "the AP should ask the interns to follow the course of why the patient was hospitalized, what you did for her/him, why s/he was discharged".

Trainees are dissatisfied with the knowledge-based assessment at the end of the course. The trainee (3) said, "An AP should not only take the trainees' theoretical literacy into account but also consider trainees' skills and as well as their observance of ethics issues in giving the trainees a final score."

Overcrowded rounds are the second subcategory. In a clinical round, when one of the APs began to talk, the trainees around him/her listened to find out what he/she was saying. One trainee (6) commented, "In most wards, all trainees, including general medical trainees and residents, meet at the patient's bedside with the APs and it's so crowded and questions and answers are not possible".

According to the trainees' experiences, each trainee needs special supervision in different situations. A trainee (4) stated, "The amount of supervision for the trainee depends on whether the trainee is in a clerkship or internship course? In the clerkship course, everything must be conducted under the supervision of one person. However, during the internship, the course is based on the trainee's experience, clinical skills, and motivation".

2.2. Conflict resolution

One trainee (8) said, "In some areas, most procedures are performed by a novice resident, and they do not give medical interns a chance". Another trainee (9) explained, "I told my AP that your teaching is resident-centric; I want to be a general practitioner. I need to learn common topics so that I can properly examine the patient and make the right referral".

Attending physicians should distinguish between their teaching and therapeutic roles.
The trainee (13) stated, "In one of the hospital wards, when the AP was visiting the patients, she did not comment on the patients' illness, and I only played the role of the author of the medical prescriptions. This is not fair".

3. Supportive Supervision

This theme includes two categories

3.1. Improving resilience

Resilience The ability of a matter to return to its normal shape after being bent and strained. The supportive behaviors have been further categorized into two types of support – emotional and instrumental support

The trainees mentioned are being APs as the exhibitor of experiences. One trainee (10) said, "Many APs have few interactions with the trainees. I was interested in talking more with my AP as someone who has taken the course and using their experiences".

One of the school actions is providing appointments with a clinical advisor in the department for trainees.

Another trainee (3) said, "The presence of a clinical advisor was recommended for trainees in each department. Therefore, trainees can more convey the problems ".

Participants repeatedly stated that respectful communication in the clinical setting is the most important factor in trainees' sense of support. One trainee (6) said, "If the AP maintains our respect for the patient, the patient will trust us and the trainee is more interested in performing clinical activities for the patient".

Instrumental support includes a range of activities concerning the practical help given by others. The AP should teach the trainees by considering the differences in learning. The trainee said, "Some trainees need additional practices. Blaming a trainee does not solve a problem. If the AP does not have enough time, ask someone else to teach the trainees".

According to the medical clerks, having responsibility in the ward improves their relationship with the personnel at the wards. A trainee (3) noted, "If a small part of the patient's responsibility is given to clerks, it will improve the relationship between the trainees and the health care team".

Some trainees are reluctant to choose a specialized field whose future work is at the patient's bedside. The trainee (9) commented, " I would like to be accepted into a specialty such as radiology so that I no longer have to deal with the patient too much. In our discipline, we have to see events like death and suffering, which is not my favorite".

3.2. Peer support

The peer group forms an informal and supportive social network (19). According to medical trainees, trainees gain experience from a variety of sources. One trainee (7) commented, "Residents should teach us rather than APs since we are in the same age group, we feel more comfortable in communicating with each other and we can ask our questions".

Another trainee stated, "We make the most of the experiences of trainees in high semesters and as our classmates".

4. Institutionalization of professional ethics

This theme includes two categories

4.1. Professionalism

This category includes two subcategories.

Professionalism in medicine is a concept that is challenging to define. As a set of characteristics that must be mastered or morally based on a medical approach (20).

The trainee's state (4) of their own responsibility, "Our relationship with our AP must be very strong so that we can easily receive help from him/her; therefore, we will not make a mistake, or if we make a mistake, we can tell him/her without fear since the patient's life may be in danger". Trainees have expressed about the professionalism of APs. One trainee (1) explained, "Some of the APs devote great attention to the patients and the patient's satisfaction is highly important to them…"

Trainees are very happy to see the active involvement of the APs in clinical education and follow their roles as a model. The trainee (11) said, "Several APs and residents really had good information and explained and performed the clinical procedures well and patiently. We felt good and became interested in our discipline".

One of the trainees commented on professional training as follows: "Professionalism training should be provided for trainees during the medical course. For example, one of the educational goals of each course should be training professional and ethical responsibilities".

A qualified AP should not delegate their responsibility to residents. One trainee (7) said, "Although residents have the responsibility to teach us, they are trainees themselves and have a lot of work to do; therefore, they may not have enough time to teach us".

A participant (5) about Professional ethics in residents stated, "We often have problems with residents; they have different personalities (stressed or careless). Sometimes residents don't understand us and we need to be in direct contact with AP ".

4.2. Observance of patient's rights

Respect for patient rights is the eighth category extracted from the data analysis process, which represents not harm to the patient or patient safety and observance of the plan of conformity. One participant (3) explained, "When I was given patient responsibility. In the wards, I was worried about whether the test was correct or not. Are the patient's visit and diagnosis sufficient to treat the patient or not?" The trainee (8) in the related observance of the plan of conformity said," In the obstetrics and gynecology ward, the woman's examination is not performed by a man in Iran.

Discussion

According to medical trainees' experience, the expanded clinical supervision functions in undergraduate medical education is associated with eight categories.

Management supervision

The first theme is management supervision. Responsibility for the trainee's tasks and work, ensuring that the trainee complies with the rules and norms of the organizations in which the work is carried (15).

According to the trainees' experiences, holding of theoretical classes during the clinical course and irregularity in multiple visits from patients by APs, residents, and trainees make clinical education messy and less important and also, in basic science, the classes are regular, but the clinical education is not regular and trainees have more stressed.

The existence of the orientation program allows trainees to better adapt to the environment in clinical settings.

Early clinical exposure approach in medical school can help learners acquire communication and basic clinical skills, it contextualizes students' learning, makes students more satisfied with their curriculum and reduces the stress of meeting patients (21).

We suggested to publish a catalog for trainees entering the hospital for the first time, including the organizational structure of teaching and therapeutic hospitals and a brief description of the tasks of the health care team, and design a one- or two-day hospital's tour for familiarizing with the structure of clinical education.

According to the trainees, the reward should be considered for the trainees' conscientiousness and acceptance of various tasks, and designing a system of encouragement and punishment is essential to increase the quality of education.

There are a variety of educational programs for medical trainees in clinical departments that should be followed by the head of the department. At Nebraska College of Medicine, at the end of each course, trainees report the clinical supervision process, review to identify any continuing worries with clinical supervision by the Curriculum Committee (22).

Trainees' participation is effective in the improvement of clinical education. It is recommended to design a website where trainees present their suggestions and criticisms without mentioning their names as well as the reasons for accepting and not accepting suggestions or criticisms.

At Minnesota School of Medicine, trainees should be encouraged to contact the department of directors about clinical, administrative, vocational, and educational affairs to share their worries (23).

Educational supervision

Educational practices, including the trainee's learning and development of trainee's knowledge or skills, and creating chances for instruction and learning (15, 16).

Medical trainees noted that clinical educators have good expertise; however, they are not able to transfer knowledge and skills. Therefore, it seems that the focus should be on the training of non-academic physicians and residents. The current study results, concordant with the results of skeff's study showed that several teaching improvement approaches have been defined for these clinical teachers; but, they are not widely used and their effectiveness in improving instruction performance has not been shown (24).

In the Hamadan University School of medicine, workshops were held for residents with topics such as design course plan, research methods, medical errors, legal medicine, cardiopulmonary resuscitation, and medical ethics, nevertheless, it does not seem to meet the expectations of medical trainees. Consistent with the present study, At McGill School of Medicine, the program planned for residents can accurately assess and teach and present clinical supervision skills (25).

Trainees are dissatisfied with the assessment at the end of the course. The reasons for some trainees' lack of motivation to learn clinical skills were knowledge-based tests, several end-of-course tests and even residency tests measure most of the trainees' knowledge and memorization rather than clinical skills. This makes trainees not to be worried about learning procedures and practical work.

The trainees requested the organization of crowded rounds. Therefore, it is necessary to using clinical education models in handling busy clinical rounds.

Ward-round teaching is a beneficial education implement that is frequently challenged by the burdens of the clinical environment (26).

Most of the participants noted that each trainee needs special supervision in different situations.
The current study results, concordant with the policies of Florida and Minnesota School of Medicine, clinical supervisors must define the stages of development of trainees and change the type of supervision by considering the level of progress, knowledge, experience gained, and self-confidence of trainees (23, 27).

Conflict resolution was also a category that emerged from the data. The presence of a general and a specialty trainee in a common round do not necessarily maximize the benefit of education; on the other hand, it may reduce the quality of education.

Fatemi's study (2016) with the aim of explanation of educational equity was performed. Results in one principal theme deterrent factors were obtained that undesirable clinical realities, lack of expert and specialist teachers in practice, interpersonal communication, the unsuitable evaluation process were effective in developing clinical educational equity process (28) .

According to the trainees' experiences, attending physicians should distinguish between their teaching and therapeutic roles and allocate time for teaching trainees at the patient's bedside.

Consistent with the present study, Esteghamati's reported (2016) Because of clinical obligations such as priority of treating the patients for education or workload of the attending physicians, residents

acquire most of their practical knowledge from colleagues, fellows, or follow-up patients in different learning conditions (29).

Supportive supervision

Supportive supervision delivers the psychological and interpersonal context that permits the trainee to mobilize the emotional energy needed for effective performance and space to opening and air distress (13, 30).

The third theme is supportive supervision, which, based on students' experience, includes improving resilience and peer support.

Resilience has a moderating effect between negative life events and psychological problems; therefore, it is essential for medical students to build resilience to improve the better adjustment of life in their school. A report by the General Medical Council (GMC) shows that one in 10 graduates feels well prepared to practice, and has acquired competencies such as self-management, resilience, patient protection, relationship skills, and work between professional teams (31).

The study has identified a range of supportive behaviors that are divided into emotional and instrumental supports. Emotional support includes a calm physical state that reduces insecurity, anxiety, tension, frustration, and depression in the other person (32).

One of the emotional support items that the trainees mentioned is being AP as the exhibitor of experiences.

According to the trainees' experiences, to decrease concerns with the improvement of interaction between APs and trainees, and the respectful communication for trainees.

Trainees' emphasis was the importance of supervisor availability during times of need or crisis.

Consistent with the present study, at the policy of the University of Nebraska reported, In conditions where an AP may be out of the place, a proper supervising physician (including resident) should be existing and aware of expectation (22) and also Caspi reported that the availability of APs is directly correlated to learning progress and increasing trainee satisfaction (33).

One of the items that the trainees mentioned is to allocate time for trainees. Consistent with the present study, Rezaee's results (2014) showed, 25.5 percent of the students stated that the advisors have provided allocated time to them (34).

One of the school actions is providing appointments with a clinical advisor in the department for trainees.
Consistent with the present study, Cusee's reported that students would desire advisors who are available, have adequate knowledge and skill are easy to speak with, and dependable (34).

Instrumental support is a tangible help that Based on the students' experience, includes considering the differences in trainees' learning, facilitating research activities, financial support, having responsibility and providing career guidance allows trainees to choose the clinical specialties required by society. The current study results, concordant with the results of Swick's study (2000) showed that support activities can be inserted into the curriculum. Separately tailored assessment feedback, stress decrease techniques, careers' guidance, personal and professional improvement sessions (35).

Peer support was also a subcategory that emerged from the data in the present study.

Definition of Peer Support from Solomon (2004) is mutually offered or provided by persons having a mental health condition to others sharing a similar mental health condition to bring about a desired social or personal change (36).

The Peer groups (i.e., residents and classmates) were also a category that emerged from the data in the present study. Consistent with the present study, Dick's reported that the peer interaction may help increase the effectiveness of trainee study in preparing for tests and to handle stress during their

undergraduate education (37) and also Prins (2007) presented that emotional support that trainees obtain from peers is more than that of clinical educators (38). There are different types of peer groups in literature reviews such as near-peer mentoring (39), peer support (40), Peer-assisted learning (41).

Institutionalization of professional ethics

institutionalized ethical principles in the formation of students' professional personalities are one of the important responsibilities of the medical school and clinical educators (42).

According to the trainees' experiences, that medical trainees often confronted ethical subjects, suggesting a need to train trainees in both pieces of knowledge of medical ethics.

Consistent with the present study, Ahsin's reported that A major percentage of students (%82) exhibited improvement in their knowledge and skills of appreciating bioethical matters like lawful informed consent, patient privacy, end of life issues and breaking bad news by rating as "very good" after participating in the workshop (43). Tabei reported that clinical supervisors must always observe professional behavior and ethical principles among students and provide timely and constructive feedback. Also, professional behavior evaluation should not be limited to the final exam (44).

Observance of patient's rights was another category that emerged in this study. Patients' rights are among the core principles in defining the standards of clinical services.

Trainees' emphasis was the importance of patients' safety. Consistent with the present study, with Standards of PMETB**,** The duties and responsibilities, working hours and supervision of learners must be consistent with the delivery of high quality, safe patient care(45).

Residents can oversee students in carrying out simple tasks but they should not have overall responsibility for supervision of the medical student. F1 and F2 doctors should act in this limited capacity only where they are fully competent to carry out the task that they are observing themselves(46).

Consistent with the present study, at the at the University of Alberta, inform their supervising physician if trainees are not able to care for the delegated patients because of the number and/or complexity of the patients assigned and/or because of stress and/or fatigue to ensure patient safety (47) and, Florida Atlantic University (FAU COM) stated that the level of student involvement in patient care by the clinical supervisor will be determined by several factors, including student growth level, the complexity of care or procedure, potential side effects, competence, maturity and responsibility of each student, and patient satisfaction (27). The AP is finally responsible for the evaluation, treatment, management, and records of patient care (48). According to the participants, in teaching hospitals should be provided that the sexual compatibility of trainees and patients is observed in order to conduct examinations and provide services.

Conclusions

The purpose of this study was to explore the core components of clinical supervision as perceived by medical trainees. The results of the present study on core components managerial supervision, educational supervision, and supportive supervision demonstrated that each supervision had different characteristics, and three supervisions were separately defined.The main purpose was to help graduate a person being without any stress and concerns, as a competent, compassionate, and qualified doctor, etc., It is thus necessary that the three supervision functions be simultaneously applied by attending physicians.

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