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Original Article

Clinical Instructors Experiences with Team Working in Clinical Education: A Descriptive Qualitative Study

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Abstract

Introduction: The aim of the present study is to demonstrate the experience of clinical instructors on team working in clinical education as a step towards promoting learners' professionalism in a healthy educational atmosphere.

Methods: In this qualitative study, data were collected through semi-structured interviews and observation. The participants were 20 clinical instructors, 8 medical student and 5 medical working staffs in multiple Iranian medical universities. Data were analyzed using Graneheim and Lundman conventional content analysis.

Results: The analysis showed three main categories. First category was "clinical education as the manifestation of team working" included "strategies to internalize team working in clinical education", "duties of instructors as the leaders of clinical education team", and "the requirements of a successful team working". The second category was "communicative skills as the heart of successful team working" included "successful team working requires good communication", "facilitators of establishing a constructive relationship between educator and students in clinical education team", "Facilitators of patient participation in clinical education as a member of education team", "preventive factors of effective relationship between clinical team members", "ethical norms in establishing rapport between learners and clinical instructors in a team" and the third category was "the outcomes of team work-based clinical education included "promoted psychological security of learners", "promoted cognitive and decision-making skills", and "increased commitment and accountability of learners".

Conclusion: By empowering instructors, we can overcome individualism because values and cultures are transmitted primarily through role modeling. Educational planners must adopt goals based on teamwork so that learners feel a sense of interdependence and internalize the team spirit.

Introduction

Team working is a main component for quality assurance of health care that promotes patients' safety.[1,2] According to a report by Institute of Medicine (IOM) of the United States, team working is one of the five principles of establishing a safe hospital system.[3] World Health Organization (WHO) emphasizes on the importance of interdisciplinary team working and educational programs that prepare medical sciences students to achieve required skills and competencies.[4,5] In the United States, 3% to 4% of hospitalized patients suffer from clinical errors.[6] Medical errors are also one of the main problems in Iranian teaching hospitals.[7] Good communication and efficient team working can prevent many of these medical errors,[6,8,9] and are vital in clinical settings[8] to provide an environment in which clinical team share their concerns regarding patients care, disease diagnosis, and patients undesirable conditions.[10] Therefore, team working plays a key role in education and health care services.[11] A trivial error in the performance of a member in a team might cause irreparable errors in team performance and outcome. Even, it might put someone's health in danger.[12] Different investigations have confirmed that team working is effective in increasing job satisfaction, creating happy work context, making better communication, decreasing absence of doctors, declining mortality, increasing the quality of health services, and promoting people's commitment.[13]

Individualism and physician–dominated culture in Iranian society has caused indifference toward team working in Iranian teaching hospitals.[12,14] In a study by Mirmolaei et al the most important barrier to team working in Iran was the hierarchical structure of decision making, injustice, and absence of team members' performance evaluation mechanisms.[15] Other studies conducted in the Iranian settings have suggested loose team working in delivering health services. In a study Tehran, Iran only 59% of nurses believed that service delivery is provided through team working.[12] A study by Jahanbin et al in rehabilitation of patients, the so called unorganized structure and programs, wrong cultural beliefs, negative attitudes toward team working and communication, and loose collaboration between health service providers serve as the main barriers to team working.[14] Pride, jealousy, fearing from losing one's position, inappropriate attitude toward team working, unawareness of team-working process and procedures are main reasons for individualism and indifference to team working.[16] Team working must be taught during academic years and the establishing common beliefs with other team members must be emphasized.[15]

On the other hand, teaching skills such as team working and establishing communications can be transferred to students through role modeling and governing culture of work settings.[17] Enjoying from the experiences of clinical instructors in creating culture and clinical teaching is a valuable source in implementation of team working suitable to the context of Iranian medical hospitals. The Agency for Healthcare Research and Quality (AHRQ) has proposed the training of teamwork skills in the field of healthcare and treatment, which includes four skills: communication, leadership, situation monitoring, and mutual support.[18] Instructors, as leaders of the training team,[19] can play an important role in creating a supportive environment and monitoring the performance of the team. Additionally, instructors who provide medical care during training will act as a hidden curriculum, influencing the performance of learners. Therefore, the experiences of instructors can be a rich source for examining the obstacles, challenges, and solutions to creating a successful team in the education of medical students. In this regard, to the best of our knowledge, there is lack of studies to explain team working from the perspective of clinical instructors based on their educational experiences. Thus, the present study aims to explain experiences of Iranian clinical instructors about team working in clinical education.

Materials and Methods

This is a qualitative study to explore key informants' experiences through conventional qualitative content analysis approach.

Participants and Sampling

The data were collected from clinical instructors with experience of teaching in a clinical setting and medical students who had participated in clinical teaching rotations and who were willing to share their experiences. Purposive sampling was utilized to select the study participants some of whom had Education Development Center (EDC) management experience in multi-Universities of Medical Sciences. In order to complete the categories, we also interviewed medical students from different educational levels and working staff from clinical units. Sampling and data collection continued until data saturation.

Data Collection and Analysis

Data were collected through semi-structured interviews and observation. Interviews were conducted in a quiet place and pre-arranged according to the most appropriate time to the participants. In the interview sessions, after explanation of the study purposes, and research method, it was announced that to take part in the interview is voluntary. Afterwards, an informed consent was secured, and the interviews were recorded after the permission of participants. Interviews were guided by topics emerging from interaction between the interviewer and the interviewee via guided and probing questions. Observations were purposive and based on interviews data analysis. With permission of managers of the teaching hospitals, one of the researchers (HH) visited each and took notes of important points observed in the real contexts of journal club sessions, morning reports and educational rounds. the researcher wrote 10 field notes from his observations in teaching s. Data analysis was performed by the Graneheim and Lundman qualitative content analysis method.[20] At the end of each interview, it was transcribed verbatim and were read and re-read by two of the researchers (HH and SHB), independently, until they immersed in interviews and first-level coding was conducted for each interview with an emphasis on manifest and implied content by identifying and highlighting units of analysis, sentences and paragraphs. Each meaningful unit was given a code. In the second step, the codes were classified into sub-categories and categories based on their scope and attributes. Then, they were assigned specific labels and come to specific subcategory. After meticulous examination of the content of the subcategories, the subcategories were merged into a category on the basis of their similarity. Finally, categories with a similar meaning were merged into the main theme. As data analysis progressed, the codes and their categorizations were frequently controlled and disagreements were solved through discussion, if there was any. In analyzing observations/ field notes, the research team reviews what was witnessed and recorded. The first researcher (HH) then converts all of the field notes into text format, after which they organize the observations based on the original research objectives and subsequently organize the data according to the research questions. Ultimately, codes are employed in the data

analysis process.

Rigor of the Study

To maintain trustworthiness of the study, four criteria of credibility, confirmability, dependability, and transferability were fulfilled.[21] For credibility, the interviewer tried to gain participants trust by making a good rapport with them. For triangulation, interviews were held with instructors of different clinical fields, medical staff, and students from different educational levels. Methodology and extracted codes were checked with qualitative research expert instructors and medical education experts. Also, by the long-term engagement with the data, data immersion was fulfilled. For data confirmability, data collection, analysis, decision making for coding and classification, and other steps were documented. For dependability, the extracted codes were reviewed in the panel of researchers and were either confirmed or other codes were selected. To promote transferability of findings, an external expert qualitative researcher analyzed the steps and data collection processes, and commented on the systematic implementation of the study steps. For maximum variance sampling, the interviews with instructors of diverse universities, clinical fields, age ranges, positions and both genders were carried out.

Before initiating the interview, an information sheet was provided to the participants to explain the purpose of the study, delineate who provided with the results, and ensure the confidentiality of information and freedom to participate or withdraw and their informed consent were secured. Each interview was recorded by a digital sound recorder after obtaining the participants' permission, and important notes were taken.

Results

The participants included 20 instructors from multi universities of medical sciences (4 faculty members from surgery, 3 from psychiatry, 2 from social medicine, 8 from internal medicine, and 3 from emergency medicine). We also interviewed with 8 students of medicine and 5 medical working staff (Table 1).

Data analysis revealed 3 main categories: clinical education as the manifestation of team working", "communicative skills as the heart of successful team working and "the outcomes of team work-based clinical education". (Table 2)

Clinical Education as the Manifestation of Team Working

In the category of "*Clinical education as the manifestation of team working* ", 3 sub-categories were emerged including "strategies to internalize team working in clinical education", "duties of clinical instructors as the leaders of clinical education team", and "the requirements of a successful team working" (Table 2).

Strategies to Internalize Team Working in Clinical Education

Instructors and authorities in educational planning can make settings for team working suitable, by providing opportunities to share perceptions, knowledge, and skills of learners and preparing settings for exchanging ideas. A student of internal medicine said "*when morning reports are held in the form of a team from different disciplines, we discuss the issue from different aspects, and the nature of team treatment, reveals itself*" (P4). A faculty member from surgery group expressed that *"a toddler suffering from recurrent ear infection referred to the hospital, I warned the students by asking this question: why this kid has recurrent ear infection? Maybe the immune system is weak. We should consult with an immunologist. In this case, the students will observe team collaboration.*" (P6) A faculty member from internal medicine department asserted that *"the students will see our conduct. If they see that I and my colleague visit a patient together, they will observe team-working"* (P11). A nurse participant with ten years of experience as educational supervisor, said *"instructors from psychiatry department ask nurses who are in charge of caring patients to participate in educational rounds, it makes them better understand prescriptions and realize the importance of their roles"* (P21).

Duties of Clinical Instructors as the Leaders of Clinical Education Team

Team leader plays a crucial role in team working and facilitates communications between members, solves disagreements, and clarifies the objectives. A participant from psychiatry department said *"I believe the physician, as the leader of group, must have effective relation with other members"* (P7). Another participant from community medicine department explained that *"a clinical instructor in a multi-cultural setting guides all members and provides a collaborative environment for them"* (P9). A participant from psychiatry department expressed *"if a physician would be a good leader, then he/ she gathers all the team members, attracts their trust and makes team-working easy"* (P12). Another psychiatrist said *"when you ask a nurse or a student: how did the patient sleep? Did you notice any change in his condition? What is a better treatment to do? All of these, make intimacy and creates a better humane relationship between the partners"* (P13).

The Requirements of a Successful Team Working

Team success requires commitment to responsibilities, mutual understanding, and mutual respect. In this regard, a participant from psychiatry department expressed *"in team working all the members must benefit unless they cannot work. There must be a win-win situation"* (P12). Another participant from psychiatry department commented that *"the hospital must delegate responsibilities to the ward manager or physician in charge to select his own team members as the head of the team"*

Table 1. Demographic characteristics of the study participants

Participant	Academic degree/Occupation position	Work experience	Age
Community medicine			
P9	Director of EDC & Director of research center/professor	22-24	45
P25	Director of Social medicine group/ professor		
Emergency medicine			
P19	Faculty member of Emergency medicine, Director of CME/Associate professor	16	45
P26	Faculty member of Emergency medicine/Associate professor	15	40
P28	Director of Emergency medicine group/Associate professor	18	42
Internal medicine			
P4	Director of teaching EDO/professor	26	56
P5	Faculty member of Gastroenterology group/Associate professor	25	58
P8	Faculty member of Infectious & Tropical diseases group/Associate professor	27	53
P10	Faculty member of Anesthesia group/professor	23	47
P11	Faculty member of Infectious & Tropical diseases group & Educational assistant of university/ Associate professor	26	54
P14	Faculty member of Gastroenterology group & MS of medical education/Associate professor	16	49
P17	Director of EDC/Associate professor	19	50
P18	Director of medical education group/professor	22	57
Medical student			
P1	Intern in the in-urology group	-	27
P2	Resident of internal medicine	second year	36
P13	Intern in the neurosurgery group		24
P24	Intern in the general surgery group	-	26
P27	Intern in the gastroenterology group	-	25
P29	Resident of internal medicine group	second year	30
P31	Intern in the ENT group	-	24
P32	Resident of psychology group	first year	28
Nurse			
P20	Educational supervisor urology ward	27	58
P21	Educational supervisor ENT ward	20	43
P22	Educational supervisor gastroenterology ward	24	49
P23	Educational supervisor psychology ward	25	55
P30	Educational supervisor neurosurgery ward	23	52
Psychiatry			
P7	A head of Psychiatry ward/professor	28	49
P12	Faculty member of Psychiatry, Manager of EDC/professor	25	52
P13	Assistant education Psychiatry group / professor	27	55
Surgery			
P3	Faculty member of Cardiothoracic Surgery group/professor	28	56
P6	Faculty member of Neurosurgery group/ professor	28	53
P15	Faculty member of ENT group & Assistant education of teaching/professor	20	50
P16	Faculty member of Urology group & Director of EBM Center/professor	27	55

Abbreviations: EDC, Educational Development Center; CME, Continuing Medical Educatiom; EDO, Education Development Office; EBM, Evidence-Based Medicine.

(P7). Another participant from the same department said *"there must be some rules and regulations to be followed by the team to encourage a member who has a satisfactory job performance, and who has dissatisfactory performances"* (P13). A participant from internal medicine department commented *"once in a week, we drink tea together, we communicate or participate in our colleagues' commemorations. We also send each other congratulation notes that makes us feel the sense of belonging to each other and increases our commitment to each other"* (P11). A nurse with 25 years of experience, as educational supervisor, said *"all members of clinical team play crucial*

Table 2. Categories and subcategories of clinical instructors' experiences of using teamwork in clinical education

Category	Sub- category
Clinical education as the manifestation of team working	"Strategies to internalize team working in clinical education"
	"Duties of clinical instructors as the leaders of clinical education team"
	"The requirements of a successful team working"
Communicative skills as the heart of successful team working"	"Successful team working requires good communication"
	"Facilitators of establishing a constructive relationship between educator and students in clinical education team"
	"Facilitators of patient participation in clinical education process as a member of education team"
	"Preventive factors of effective relationship between clinical team members"
	"Ethical norms in establishing rapport between learners and clinical teachers in a team"
The outcomes of team working-based clinical education	"Promoted psychological security of learners"
	"Promoted cognitive and decision-making skills"
	"Increased commitment and accountability of learners"

roles; for example, the physician diagnoses and if the nurse does not follow the orders, the patient will never recover" (P23).

Communicative Skills as the Heart of Successful Team Working

In "communicative skills as the heart of successful team working", we defined 5 subcategories: "successful team working requires good communication", "facilitators of establishing a constructive relationship between educator and students in clinical education team", "Facilitators of patient participation in clinical education process as a member of education team", "preventive factors of effective relationship between clinical team members", "ethical norms in establishing rapport between learners and clinical instructors in a team" (Table 2).

Successful Team Working Requires Good Communication

Communication, as one of the most important aspects of team working can maintain team integrity. With the absence of good communication, team working can be a terrible experience for the members and team cannot achieve its objectives.

A participant from surgery department explained *"if a student does not participate in discussions, I will find a solution to attract his/her attention!!! Once, I told one of my students that you have fine fingers and you will do good surgery. He/ she changed and became greatly motivated"* (P16). Another participant from psychiatry department commented *"when a nurse or student says: what do you think? Is it better to do so? By asking these questions, he/ she feels the sense of importance and does the task in an appropriate way"*. (P7)

Facilitators of Establishing a Constructive Relationship Between Educator and Students in Clinical Education Team

The presence of fear-free atmosphere to express ideas and create a sense of intimacy between members and leader facilitates communication. A participant from an internal medicine department expressed: *"after a while, I realize my students' moods. They gradually get familiar with me. When I see the round gets longer and my students are tired, I ask them to go to Ultrasound / sonography room and drink tea with biscuit and come back. They understand that I have noticed their tiredness"* (P18). Another participant from internal medicine department also uttered *"we are more comfortable with residents because they spend a longer time in the department and we work together for longer periods. When they have problems, they come to me and we talk"* (P14). Another participant from internal medicine department said *"I prepare the setting in a way that the students become eager to express their ideas comfortably and without any fear. They will not be punished for their incorrect answers and they will not be evaluated by scores"* (P4).

Facilitators of Patient Participation in Clinical Education Process as a Member of Education Team

Patient is an inseparable part of clinical education. If we involve patients in educational rounds and gain their trust; then, they will collaborate well and the round will not be boring. In this regard, a participant from surgery department expressed *"when you enter the ward and greet the patients… you introduce students, and say if you allow, I visit you, and the students would visit you, the patient become unconsciously collaborative"* (P3). Another participant from a surgery department expressed *"sometimes I tell students, when a patient cannot walk alone and when you take their hand; then, he trusts you and realize that you have sympathy with him"* (P15).

Preventive Factors of Effective Relationship Between Clinical Team Members

Tough and strict atmosphere in educational rounds, simultaneous education of students from different levels of education, and indifference to patient's rights can lead to lose team working. Sometimes, all members do not engage in team activities that declines team efficiency. In this regard, a participant from internal medicine

department commented *"educational levels are numerous and sometimes it is difficult to involve all educational levels in team working. Practically one level is ignored"* (P5). Another participant from internal medicine department said *"a tough atmosphere in the educational rounds, may happen due to cultural differences. If an instructors is serious, the students will think he knows more"* (P10). A participant from internal department explained *"patients do not trust students and sometimes give them incorrect information and make fool of them"* (P17). Another participant from internal medicine department commented *"we rarely ask permission from patients in educational rounds"* (P12). A participant from psychiatry department also expressed *"people are not intimate with each other and do not feel the sense of belonging to each other. Some co-workers do not perform their orders properly and the department head treats them commandingly; as a result, they cannot establish a good rapport with each other"* (P7). Another participant from psychiatry department explained that *"many psycho-emotional factors are involved. You cannot work in a team properly if your nurse colleague does not like to work with you"* (P13). Another participant from the internal medicine department uttered *"when I and my co-workers are not adapted to team working, then what is expected from the students when to receive the consultation results is delayed more than three days … they learn from our deeds"* (P11).

Ethical Norms in Establishing Rapport between Learners and Clinical Instructors in a Team

Respecting team members' identity and following ethical rules can promote commitment among members. In this respect, a participant from emergency medicine department concluded that *"we are not allowed to humiliate a junior student in front of a senior one and vice versa. If a resident cannot answer a question, it should not be asked immediately from an intern. This will jeopardize their relationship and they cannot work together from now on"* (P19). Another participant from internal medicine department said *"if a student makes a mistake, humiliating him in front of the patient makes him frustrated; more, the patient loses his /her trust in the student"* (P14). Another participant from internal medicine department expressed *"share your feedbacks with students on their mistakes, but do not humiliate them. This issue makes the student to isolate himself from the team"* (P5). A psychiatry department member uttered *"we should not ask questions out of students' scope of knowledge; some clinical instructors frequently ask questions from students to degrade them and encourage them to study more"* (P7). A surgery department member commented *"I always tell my students that I have only studied 3 or 4 years more than you. In a few years, you will be specialist and we will be colleagues. Therefore, I increase their self-reliance"* (P6).

The Outcomes of Team Working-Based Clinical Education

Three sub-categories were emerged for the category of "the outcomes of team working-based clinical education" that included "promoted psychological security of learners", "promoted cognitive and decision-making skills", and "increased commitment and accountability of learners" (Table 2).

Promoted psychological security of learners

Psychological security of learners is one of the crucial components of effective teamwork. A safe environment creates an increased interaction among team members, promotes higher level of cognitive activity, and emotional comfort of students. Students become more active and motivated when feeling safe. An instructor from a surgery department stated *"I always say, the lowest-ranked member is the most important one, his mistake can destroy our work, an extern who takes incomplete history from patients can mislead us and this results to improper diagnosis. By this, I highlight their position and importance"* (P16). Another participant from a surgery department also commented that imagine *"a patient with the history of upper respiratory tract infection referred to a hospital. A resident diagnosed pharyngitis. When recording patient's history, the extern noted that the spleen is inflamed. At this point, diagnosis will be changed. I say, you see how important the role of each member is!!! We all together can reach the right diagnosis"* (P3). An extern said *"we have happy rounds. We laugh together. We ask questions in case of any problem. We know that our senior students are with us and in case of occurrence of any medical error, they correct us"* (P27). Another student expressed *"we are connected via social media. We propose interesting scenarios and discuss them with our peers"* (P32). A clinical instructors of surgery commented *"we have happy rounds. We laugh together and in case of punishment, the trespassed student buys sweets"* (P15). An intern said *"when we acknowledge our errors, we do not repeat them afterwards"* (P31). Another intern also uttered *"we deal with patient's life and a mistake can put one's life in danger. We have unconscious fear, so we stay together"* (P24). Another student stated that *"we do not compete. We have common goals: right diagnosis and treatment. It means quiet and safe educational atmosphere"* (P27).

Promoted Cognitive and Decision-Making Skills

Problem-solving ability is another capability of the clinical team to be expected. Learners' engagement in team working and exchanging ideas with their colleagues enhance their decision-making skills. In fact, it facilitates problem-solving abilities and prepares learners to encounter similar situations. An intern stated *"when a scenario is proposed, everybody comments on it, and if we do not understand a part of it, we divide the emerged questions between us to be searched and responded, then*

we share our findings with each other. It helps promote our problem-solving skills for similar situations" (P27). An instructor of internal medicine expressed *"we visit the patient and I assign each part of the patient management program to one student. For the next session, the students should share answers with others and then solve the problem together. It helps improve their decision- making abilities and collaborative learning"* (P4).

Increased Commitment and Accountability of Learners

Training committed and accountable learners is one of the ultimate goals of higher education in medical sciences. Sense of accountability among learners can be increased through team working and people feel themselves responsible in the treatment of patients. A participant from internal medicine department stated *"the students must know that they are responsible, not only for their duties, but also for other treatment team members. They should do everything on time"* (P18). A participant from an emergency department expressed *"when we assign a responsibility to a member, we engage everybody to take part in the treatment of the patient. In this case, even the extern knows that he should do the assigned work on time, and must be responsive to the resident"* (P28). An intern stated *"we feel ourselves important in the team. We unconsciously feel responsible to receive CT report on time, and to ask for patient's clinical examinations report"* (P24). Another participant from an internal medicine department explained *"I follow the patients' management plan in front of the students. I call CT imaging technician and ask for CT report. I ask an extern 'You should do it while I am observing'. I tell a resident 'What are the reasons of not asking for the patient reports'. The next time, I see that the reports are prepared and ready for the round discussion. By this, we save time and the student realizes that we are serious. In treatment, each second is as precious as gold"* (P5).

Discussion

This study attempts to demonstrate clinical teacher's experiences of team working in some Iranian teaching hospitals. Team working is an inseparable part of education and treatment in medical sciences.[22,23] Most of the medical errors can be prevented by team working.[22] Therefore, creating the culture of team working among medical students can be the main outcome of medical education. Internalizing the values such as accepting accountability of self-performance and peer-learning, learning the necessary skills and appreciating them,[24] collaborating with other team members, highlighting team functions[25] and efficiency instead of individualism, can be achieved through team working. Therefore, medical universities should provide opportunities for collaboration of learners and by this, the gap between learners' personal skills and the expectation of clinical team in real settings are fulfilled.[26] A clinical teacher, as the team leader, must train team-oriented fellows and promote team working culture in clinical education settings.[11] The medical teacher is accountable in providing opportunities for exchanging ideas, frequent revisions of self and others' performance, assessing team performance, and finally team leading.[27,28] The clinical instructors must work on the good features of team members, eliminate discrepancies, and provide the team with internal coherence in a way that gradually, learners feel the sense of belonging to the team and other members, and also consider themselves as important part of the team. There is no individualism in treatment and team performance matters.

One aspect of collaborative learning is communication. Without good communication a team no longer exists and cooperation among members will not continue. A successful team working depends on respectful and comfortable communication with other members.[24,29,30] In a clinical team, in which different levels of students participate, collaborative learning can be turned into a nightmare without good communication[31] leading the individualism to grow up. In a collaborative learning atmosphere, factors such as members' mistrust to each other, discrepancies between the members,[22,32,33] disrespect to each other, and hierarchical structure cause team failure. In order to overcome the barriers to team working, the learners must understand that they have shared objectives of right diagnosis and treatment.[34] Each member should be a complementary part of the team, establish trust with others, and creates constructive communication with them.[35] Team working spirit must be regarded as a value by the team members. Finally, by enhancing team working skills we can promote learners' cognitive and decision-making skills, self-esteem, social competence and commitment.[36-38] In a quasi-experimental study by Baumberger-Henry, collaborative learning promoted learners' decision making and problem solving abilities.[39] Students learn efficiently in a stress-free environment.[11,40] Psychological safety allows students to speak freely without fear and become more open-minded, robust and motivated.[39,41,42] By internalizing team working, team members will support each other[36,43] and achieve a sense of belonging to them, which finally results in creation of a happy educational atmosphere, and training professional learners[43] who achieve professional skills[44,45] as well as medical knowledge and skills.[43] In teaching hospitals, by considering team working factors such as team process (e.g. communication, leadership, and decision making),[46] socio-psychological behaviors (e.g. team coherence, and norms), designing tasks and duties (e.g. team structure, dependency and independency levels),[47] one can design an efficient clinical team.

Conclusion

Training learners who work efficiently in a team can lead to training of accountable learners and ultimately accountable teaching hospitals in which all the involved

parties feel themselves responsible in the patient treatment with the shared goal of treating patients. In making team working as a value in medical studies, instructors are the main capital because the values and cultures are mainly transferred via role modeling and the hidden curriculum. By empowering instructors, we can overcome individualism. Educational planners must adopt objectives that promotes collaboration between different levels of medical students so that learners feel a sense of dependency to each other and internalize team working spirit. In this regard, social media is helps promote team working at a low-cost. In Iranian clinical settings it is possible establish active teams through chat rooms created for special fields or interdisciplinary networks that facilitate communications among team members. They also make communications between instructors and learners possible, anytime and anywhere. The present study showed that medical instructors will facilitate implementation of team working. It is suggested that for future studies, quasi-experimental investigations be conducted to implement team working and measure its efficacy in Iranian clinical settings.

Research Highlights

What is the current knowledge?

- Globally, the level of teamwork in the delivery of healthcare services is loose.
- Individualism and physician-dominated culture in Iranian society has caused indifference towards teamwork in Iranian teachings.

What is new here?

- first effective strategies for fostering teamwork and communication skills among medical students is to reinforce the spirit of teamwork
- second strategy is transferring team working to students through the use of role-modeling abilities of instructors

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Author's Contribution

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Competing Interests

No competing interests.

Data Availability Statement

The data generated or analyzed during the concept clarity process have been incorporated into this published article.

Ethical Approval

This study was supported and granted by the vice-chancellor for research of Iran University of Medical Sciences and approved by the Committee of Research Ethics (IR.IUMS.FMD.REC.1398.217). Before initiating the interview, an information sheet was provided to the participants to explain the purpose of the study, delineate who provided with the results, and ensure the confidentiality of information and freedom to participate or withdraw and their informed consent were secured. Each interview was recorded by a digital sound recorder after obtaining the participants' permission, and important notes were taken.

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