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Obstacles to the Development of Physiotherapy in Iran

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Abstract

Background: Despite the breadth and diversity of physiotherapy healthcare services, the entry of physiotherapists into the field of prevention and also direct access of physiotherapists to patients in the world for 10 years ago, Iranian physiotherapists have not had direct access to clients, yet. One way to overcome the current situation and move towards the growth and development of the profession is to identify the opportunities and threats of the field. The purpose of this study is to explain the obstacles to the professional development of physiotherapy from the point of view of graduates of this field.

Methods: In a qualitative study of the content analysis type, the experiences of 12 physiotherapy scholars in three levels of study, bachelor's, master's and doctorate were obtained through a structured and semi-in-depth face-to-face interview. Simultaneously, as the data was collected, the data was analyzed based on Granheim and Ludman's content analysis method.

Results: A total of 28 codes were extracted to explain the obstacles to the development of physiotherapy in Iran, which include "low attention to professional ethics", "inefficient policies of the Ministry of Health, Treatment and Medical Education" and "traditional teaching methods".

Conclusion: If the adherence to the principles of professional ethics is not strengthened, the policies of the Ministry of Health and Medical Education (MHTME) cannot facilitate the growth and development of the profession, and fundamental changes in the education and training of students will not take place, not only will the quality of physiotherapy services be lower than international standards, but many high medical expenses will also be imposed on people and insurances.

Keywords: Delivery of health care, Ethics, Growth and development, Iran, Physical therapists, Physical therapy modalities, Professional

Introduction

Quality of physiotherapy services has a significant impact on reducing the disability of patients with neuromusculoskeletal disorders. Lack of attention to the needs and problems of physiotherapists, as well as lack of attention to the quality of services provided to patients, has negative effects on the health level of society and increases health care costs. Due to the increasing trend of debilitating diseases, the increase in the number of elderly people and the changes and developments of industrial societies, it is necessary to improve the clinical competence of graduates to provide the best physiotherapy services (1-3). In recent years, huge developments have been taking place to improve the quality of physiotherapy services. For example, in North America and even in Iran's neighboring countries such as Turkey, Pakistan, and India, the basic level of physiotherapy has been upgraded to a professional doctorate (4,5). Despite the fact that more than 60 years have passed since the history of physiotherapy services, there is a long way to bring the profession of physiotherapy to a favorable state and similar to that of the advanced countries. Despite the breadth and diversity of physiotherapy healthcare services (6,7) and the introduction in the field of prevention in the world (2), there has been no significant progress and change in Iran to improve the quality of services. In addition, the ability to evaluate, diagnose, and clinical reasoning of physiotherapists has grown so much in all parts of the world that patients have direct access to physiotherapists without a medical doctor's intervention (2). While in Iran, patients' access to physiotherapy still needs to be done through a medical doctor, and physiotherapists play a small role in preventing diseases and screening for postural disorders in schools and kindergartens, preventing the complications of poor mobility prevailing in societies, complications caused by old age, and children's developmental and motor disorders. In order to know that the root cause of the lack of progress and development of the profession is the use of traditional education, absence of expert decisions of health policy makers or the inadequacy of costs paid by insurance to support people's health, or other cases, it is necessary to achieve a correct understanding of the problems of physiotherapists working in different fields of work by conducting qualitative research to reach better results regarding the problems of physiotherapists employed in different fields of work. One way to overcome the current situation and move towards the growth and development of the profession is to identify the opportunities and threats of the field. Therefore, the purpose of the present study is to explain the obstacles to the development of the physiotherapy profession from the point of view of the graduates of this field.

Materials and Methods

The current study is qualitative research using content analysis, in which the experiences of 12 physiotherapy students in three educational levels including bachelor's, master's, and PhD were examined. The current research was approved by the Strategic Research Center of the MHTME with the code 992103 and the National System of Code of Ethics in Biological Research assigned Ir.Nasrme.Rec.1400.093 code for it. Data was collected through in-depth face-to-face interviews. To ensure a smooth process, all the interviews were conducted with prior agreement and appointment in a location that was convenient for the participants. The aim was to hold conversations in a calm setting with minimal interruptions.

In the present qualitative study, purposeful sampling was used, where the inclusion criteria were having a degree in physical therapy and a minimum of five years of work experience as a physical therapist. In order to increase the credibility and generalizability of the study results, the participants were selected with the maximum diversity in age, gender, educational level, work experience, field of work, and university of education. Data collection was done through semi-structured interviews with open and pre-determined questions that were conducted face-to-face to enable the participants to express their feelings, thoughts, and experiences freely. The interviewer attempted to create a warm and friendly atmosphere during the interviews while avoiding any haste. Each interview lasted 30 to 60 *min*, and the questions revolved around the obstacles in the development of physical therapy. The sequence of the questions for each participant varied, and it depended on the responses of each individual. To gain a deeper understanding of an interviewee's response, the researchers used

probing questions such as "Can you provide more information about that?" or "What do you mean by that statement?" Alternatively, the interviewer asked "why?" or "how?" questions to elicit more detailed responses from interviewees (8). Additionally, during the interview, attention was paid to body language (silence, laughter, posture, and body movements), as body language has a significant impact on understanding the intended meaning (9). Finally, the participants agreed to be contacted if any questions arose.

The gathered information was analyzed concurrently with data collection using the method of Graneheim and Lundman content analysis (9). All the interviews were recorded and then transcribed word-for-word and a copy of the interview text was made available to the participants for revision or clarification if necessary. The transcribed text was read several times to gain greater insight into the participants' statements. According to the research objectives and questions, meaning units were identified, summarized, compressed, and coded. In the next stage, the extracted codes were sorted into categories and subcategories based on content homogeneity, with each code placed in only one category (10). Finally, the main themes were defined from the codes obtained.

To increase the credibility, the typed interviews were reviewed in each session until the main themes were emerging. The researcher tried to use prolonged engagement and persistent observation to increase the objectivity of the data (11). Additionally, peer check and member check of the observers and participants was done. For this purpose, the interview text and the extracted codes were presented to the participants so that they could comment on its authenticity. In case of any discrepancy, it was considered and investigated. In addition, the researcher clarified the sentences that were unclear or the participant's understanding of the subject was not understood correctly through phone calls and e-mails. In this research, the research audit, *i.e.*, the detailed examination of the data by an external observer, was used to check her possible similar understanding with the researcher and search for contradictory cases in order to increase the dependability of the research. To achieve confirmability, a professional interviewer with six years of experience in qualitative research was utilized. Also, confirmability and transferability were tried to be guaranteed by thick description of the participant selection with maximum variation, data collection, analysis process, and leaving aside the thoughts and mentalities of the researchers from any bias (10,12). Also, for triangulation, an interview was conducted with an expert medical doctor who was aware of the physiotherapy fields (12,13).

Results

In the present study, 12 physiotherapy graduates were interviewed. Among them, 8 individuals had a doctoral degree and were members of the faculty of universities in the country. One graduate had a master's degree and three had a bachelor's degree. The age range of the participants was between 36 and 58 years old, with a mean age of 47.75. In this study, saturation was achieved with a sample size of 12. This means that no additional data or new themes emerged from the conducted interviews, and the data became repetitive. Some characteristics of the participants in this study are presented in table 1.

Through data analysis, a total of 28 codes were identified and classified into three categories: Lack of adherence to professional ethical standards, policies of the MHTME, and traditional teaching methods. Table 2 illustrates the categories and subcategories of obstacles to the development of physiotherapy. Given the large number of codes obtained, a summary of the findings is presented below.

Lack of adherence to professional ethical standards

It appears that some graduates of physical therapy do not adhere to professional ethical principles. Ten codes were identified under this category: using non-specialist personnel for treatment, referral-based fee splitting, conflict of interest, disregard for quality of service, prioritization of the interests of the practitioner over the patient, self-serving communications, insufficient treatment time, increasing income at the expense of ethical guidelines, mandatory compliance with unethical regulations of superiors, and lack of serious consequences for violating ethics.

Despite the fact that the involvement of non-professionals in medical, physiotherapy, and

Table 1. Characteristics of the participants

Row	Age	Sex	Education	Work experiences	Special field
1	45	Male	Ph.D.	23	Faculty member, Neuromusculoskeletal physiotherapist
2	49	Male	Ph.D.	26	Faculty member, Sport physiotherapist
3	36	Female	Ph.D.	14	Faculty member, Neuromusculoskeletal physiotherapist
4	54	Female	Ph.D.	29	Faculty member, Neuromusculoskeletal & elder physiotherapist
5	55	Male	M.Sc.	32	General fields
6	52	Female	Ph.D.	15	Faculty member, Neurologic physiotherapist
7	58	Male	Ph.D.	36	Faculty member, Sport physiotherapist & EMG analyzer
8	54	Female	B.Sc.	43	Pediatric neurology & Pelvic floor physiotherapist
9	41	Female	B.Sc.	18	Neuromusculoskeletal & pain physiotherapist
10	51	Male	B.Sc.	31	Neuromusculoskeletal & pain physiotherapist
11	40	Female	Ph.D.	17	Faculty member, Neuromusculoskeletal physiotherapist
12	38	Male	Ph.D.	5	Faculty member, Neuromusculoskeletal & cardiopulmonary physiotherapist

other licensed fields is considered a crime, some physiotherapists unknowingly seek the help of untrained individuals to treat the patients. One participant stated: *"Many tasks in clinics are performed by receptionists or students in their second, third, or fourth semester. How can a clinic have 100 patients when we know it is employing assistants"* [P4]*?*

One of the concerns of therapists is increasing the number of patients in order to cover the high costs of running a clinic. In this regard, some physicians refer patients to physiotherapists on the condition of sharing their fees. A physiotherapist expressed: *"when our graduates start a clinic, they choose wrong methods like giving commissions to doctors just so that they can cover their expenses and have patients in their clinic" (10).* Another individual mentioned: *"due to the high cost of equipment, many graduates take out loans from banks or purchase machines in installments and use commissions to attract patients. Unfortunately, this practice does a lot of damage to physiotherapy and the profession, but they are forced to do these things since the cost of the equipment is too high"* [P9].

The conflict of interest between hospitals and universities in physiotherapy profession is an ethical challenge that limits growth in the field. A physiotherapist said: *"There are many problems. At the university level, financial resources are important for the hospital administrator, while student education is important for the university. There is a conflict of interest here. It is an educational center and students should see patients there, but there is also an appointed supervisor who tries to make money from the patients. The faculty wants to remove that supervisor because he does not cooperate with them well, but the hospital administration disagrees, saying he has increased their income by ten times"* [P7] (14-16).

The provision of health services should not be based on self-interested relationships. It has been suggested that newly graduated physiotherapists who work for clinic owners often experience a disadvantageous situation in terms of payment and may even face the label of being a "thief" as they appear to be exploiting their ties to the clinic owner: *"If a newly graduated physiotherapist wants to work for someone who owns a clinic, they often lose money or earn very little, and the salary offered by the employer is low, so they try to find a way to cheat at work. These relationships*

Table 2. Categories and subcategories of obstacles to the advancement of physiotherapy in Iran

The codes	Below the themes	Themes
Using non-specialist forces to treat the patient	Lack of attention to professional ethics	Obstacles to the progress of the field
Fee sharing on the condition of referring patients		
Conflict of interest		
Ignoring the quality of service		
The priority of the therapist's interests over the patient		
Benefit-oriented communication		
Less treatment time for patients		
Increasing income		
Forced to follow the unethical and unscientific rules of supervisors		
Absence of serious consequences in case of violation of ethics		
Outsourcing the provision of health services to the private sector	Policies of the ministry of health	
Inadequacy of facilities and human resources with the number of students		
Unfairness of insurance treatment fee		
Low fee compared to the work pressure		
Inadequate work of the rehabilitation assistant		
Neglecting the capacities of the field		
Lack of justice in education		
Physician-mediated access to physical therapy		
Not recognized clinically		
Weaknesses in teaching decision-making and clinical reasoning	Traditional educational methods	
Weakness in finding effective evidence		
Using traditional methods of teaching and evaluation		
Weakness in teaching interdisciplinary cooperation		
Weakness in prioritizing services based on patients' needs		
Weakness in collecting documents and medical records		
Weakness in interdisciplinary courses		
Weakness in diagnosis		
Weakness in teaching imaging techniques and other diagnostic methods		

are profit-oriented and ultimately harm the patient" [P7]. Another physiotherapist pointed out that physiotherapy is often undermined by other fields of study: *"We have the interference of other fields, such as physical education, without even having a solid scientific base. Why do they have a voice in our field? Lobbying may be the answer"* [P12].

Policies of the MHTME

The experiences of the participants have shown that the misguided policies of the Medical Council can hinder the growth and development of the physiotherapy

profession. Nine codes were identified for these policies, including outsourcing of healthcare services to the private sector, inadequate facilities and human resources for the number of students, unfair insurance treatment fee, inadequate fee relative to workload, underperformance of the rehabilitation department, neglect of field potentials, lack of justice in education, physician-mediated access to physiotherapy, and lack of recognition of physiotherapy as a clinical practice. According to the participants, insurance treatment fee seems biased and unfair, consequently pushing therapists towards greater use of electrotherapy. A participant in this matter stated: *"You can tell they're charging very little for exercise therapy. Since most treatment fees are going towards shock wave and laser treatments, it makes sense for me to do the same. I need to justify the cost of my work"* [P10].

The salary of physiotherapists employed by government organizations and private hospitals is not sufficient relative to the workload and the high number of patients [P7]. During one interview, a physiotherapist complained: "*if you do a good job, do all the positioning for the patients and do manual therapy... the money you make will not be enough for your own treatment"* [P6].

One of the obstacles to the growth and development of physiotherapy has been the lack of an independent deputy for rehabilitation affairs as the main policymaker in the rehabilitation field. One graduate stated: "*In our country, while there is a lot of focus on providing medical or pharmaceutical services, there isn't nearly as much attention given to rehabilitation or recovery services. For example, in our Ministry of Health, we have a deputy for treatment and a deputy for pharmaceuticals, but we don't have a deputy for rehabilitation. This disregard or lack of attention to the topic of rehabilitation is really problematic for us"* [P7].

Another individual mentioned that: *"Physiotherapy and Rehabilitation services are divided among government agencies, with the Welfare Organization providing one part, the Red Crescent providing another, and universities providing the rest"* [P5].

The lack of certain capacities and clinical skills in the field is another obstacle. It seems that the reason for this lies in the absence or weakness of clinical training in areas such as geriatrics, rheumatology, pediatrics, pelvic floor and neurology (17).

A participant added: "*Right now, we only have two specializations in graduate studies, which are sports physiotherapy and general physiotherapy. Other specializations like geriatric rehabilitation, neurology patient rehabilitation, cardiovascular rehabilitation, and even areas like pediatrics, rheumatology and post-surgery rehabilitation are also needed"* [P2].

In addition to what the previous participants have stated, one physiotherapist said: "*It's necessary for us in our country to adopt a disciplinary view and actually consider subspecialty or fellowship. This means that if a physiotherapist, for example, is treating patients with spinal cord injuries, they should only focus on spinal cord injuries. If they are in orthopedics, they should only focus on orthopedics. This approach allows us to provide better, more suitable, specialized services and prevents the system from having one physiotherapist trying to treat a wide range of problems without being able to manage them properly in-depth"* [P5].

Physiotherapists have emphasized that the ability to accept patients who directly seek our services and provide therapeutic treatments is not widely recognized within our legal framework and that is one of the hindering factors to the growth of physical therapy in Iran (17,18). *Although the concept of screening has been incorporated into the responsibilities of physiotherapists at the bachelor's degree level, it is not legally recognized in our country to directly refer patients to physiotherapists, especially through self-referral, and provide therapeutic services"* [P5].

Traditional teaching methods

The 9 codes obtained for traditional teaching methods consist of weaknesses in teaching clinical decision-making and reasoning, weakness in finding effective evidence, using traditional teaching and assessment methods, weakness in teaching interdisciplinary cooperation, weakness in prioritizing services based on patient needs, weakness in documentation and collection of medical records, weakness in interdisciplinary courses, weakness in diagnosis, weakness in teaching imaging techniques and other diagnostic methods.

Physiotherapists' struggle to find documents and evidence that demonstrate the effectiveness of their

treatment can impede the progress and growth of the field: *"At universities, some professors aren't really concerned with evidence and just keep repeating the same things for years. However, education should be evidence-based, meaning that certain topics that have been shown to be ineffective through evidence should be removed and replaced with newer methods"* [P4]. This participant emphasized the importance of up-to-date methods of assessments and examination as a means to evaluate the students' competence in applying theoretical knowledge and practical skills to real-life scenarios: *"Many universities still use traditional assessment methods and do not employ different evaluation mrthods according to different levels of learning based on Miller's pyramid. Additionally, internship and clinical exams should measure skills, not just a few tests, theories and questions. Theories should also move towards problem-solving; a scenario should be given to the students so that they understand how to use what they have learned to treat the patient and write a treatment protocol. Often, the course plans of professors and their teaching methods are outdated"* [P4]. Another graduate added to that: *"When students take exams, they mention a certain section of a note and say that a certain professor asked a question about it. However, it's important that all professors refer to the same references, so there are no differences between questions asked by different professors from different sources. This makes it easier for students to study and perform well on the exams"* [P11].

A graduate student identified a weakness in physiotherapists' ability to accurately diagnose the patients, which may contribute to poor treatment outcomes: "*When we look at why our treatments don't work well, I think a major part of it is because we don't evaluate the initial condition carefully enough and we don't keep track of the progress by not doing regular, session-by-session assessments"* [P9]. Another person mentioned that: *"Everyone is now just focused on learning techniques and treatment methods, but because they are weak in diagnosis, they may not be effective"* [P1]. It seems that it is very important to make the supervisors of clinical education aware of the tools and methods of evaluating the clinical performance of students (19).

Discussion

Obstacles to the professional development of physiotherapy

Lack of adherence to professional ethical standards: The experiences of physiotherapy graduates in Iran demonstrate that the lack of attention to professional ethics, ineffective policies of the MHTME, and traditional teaching methods hinder the growth and development of the physiotherapy profession. While education and skill acquisition are important, equal attention should be given to developing attitudes, ethical standards, and professional competencies (20). Therefore, becoming a physiotherapist is equivalent to acquiring a new identity in life, where the individual accepts responsibility and possesses a set of specific characteristics to practice the profession of physiotherapy. The ethical core of these characteristics is to prioritize the patient's benefit over the therapist's personal interests (21). Ethics should be the basis of human behavior and the model of professional practice for every physiotherapist. However, contrary to the expectations, adherence to ethical principles is rare in the job market and professions in Iran. Some physiotherapy department managers are seeking measures that can increase their income, which are often unethical, as they focus on the interests of the therapist rather than the patient's benefits. Private clinic managers who prioritize profit over ethics force their therapists to engage in unprofessional behaviors for more income generation, such as reducing the duration of electrotherapy below standard level or excessive use of electrotherapy and not using manual treatment methods and therapeutic exercises (22). Even if the subordinates of department managers are committed to ethics, they are forced to comply with their supervisors and secure their interests to maintain their job security. Another unethical solution is attracting more patients for profit without increasing the number of therapists. Instead, they use receptionists or untrained individuals instead of therapists. Another unethical solution is reducing the treatment time for patients, which leads to a decline in the quality of healthcare services (14-16). Another unethical solution is dividing commissions based on patient referral conditions. If there are no consequences for unethical behavior and these

behaviors become institutionalized in society, not only will patients trust be undermined, but also the reputation and dignity of the profession will be at risk. Conflict of interest in medical education centers is contrary to the spirit of education, since services provided by students are not for the benefit of an individual supervisor or a specific person.

Glicken *et al* and D'eon *et al* believe that there is a fundamental difference between what is taught to medical students in educational environments and what they learn, which indicates a hidden curriculum and includes learning in interpersonal interactions beyond the formal curriculum. In fact, the hidden curriculum is a way of learning that medical students acquire by spending time in institutions outside the formal curriculum and from the behaviors and attitudes of their professors (23,24). Negative experiences in educational environments have a negative impact on shaping professional behaviors. Greater familiarity with professionalism, attention to the role of the hidden curriculum, and modeling of learners' norms and behaviors, as well as integrating professionalism criteria into evaluation forms for professors and students and systemic supervision of student and faculty professional behaviors, can be a solution to promote professional behaviors (25).

Policies of the MHTME

In the current conditions of society, ineffective policies of MHTME are another obstacle to the growth and development of the physiotherapy profession in Iran. In line with the goals of the Fifth Economic, Social, and Cultural Development Program, the policy of "outsourcing physiotherapy health services to the private sector" has been formulated, especially in physiotherapy student training centers. The aim is to provide the conditions for developing non-state sector participation and reducing state dominance in the health sector with the aim of promoting a culture of cooperation and collaboration, making use of the potential of healthcare graduates and related fields, and creating employment for these professions. It seems that outsourcing healthcare services to the private sector has caused irreparable damage to the health system in teaching hospitals (26). Kiesner *et al* identified seven main challenges (economic issues, structural problems, human resource challenges, responsibility and accountability, planning challenges, efficiency, and private companies) as consequences of outsourcing healthcare services to the private sector. The important point is that if attention is paid to profitability in educational treatment centers, the quality of services will decrease, which is to the detriment of the people. Additionally, the increase in student acceptance capacity has not been accompanied by an increase in the number of healthcare educational centers and faculty members (27). This mismatch between facilities and human resources with the number of students can have negative consequences such as reduction in the supervision of clinical training of students and discouragement among professors and students.

Another policy that hinders professional growth and development is the unfair insurance treatment fee. Although most physiotherapy services worldwide are based on assessment, exercises, and manual techniques, the lowest treatment fees have been considered for these services in our country. When physiotherapists' salaries for effective training and exercises, which are very time-consuming, are insufficient, they unintentionally resort to electrotherapy, for which insurance has allocated high treatment fee (28). Therefore, insurance treatment fee is a deterrent for therapists to provide services other than electrotherapy, which have considerable evidence and documentation on their effectiveness. The commission fees of medical-dependent professionals have not been regulated relative to their workload and job difficulty, which naturally leads to many physiotherapists under high work pressure preferring to end their workday with minimal activity and reserve their energy for other income-generating avenues. Although a rehabilitation consultant has been established at the MHTME, this consultant has been ineffective in addressing rehabilitation issues and has not yet been able to seriously introduce rehabilitation into prevention. According to global health system standards, prevention is more important than treatment. Although rehabilitation is at the third level of prevention (4), in many successful countries in providing physical and mental health services, rehabilitation, especially physiotherapy, has entered the first level of prevention. All activities aimed at promoting individual health at the prevention level

are called primary prevention. Physiotherapy in Iran has been neglected at both the prevention and treatment levels. All activities carried out to promote individual health at the level of disease prevention are called primary prevention. However, physiotherapy has been neglected at both levels of prevention and treatment in Iran.

The field of physiotherapy has 9 areas of work worldwide, including pediatrics, sports injuries, obstetrics, geriatrics, clinical electrophysiology, cardiovascular-pulmonary, neurology, orthopedics, and oncology. Empowering physiotherapists in all these areas requires a wide range of disease education (theoretical, practical, and clinical units).

Physiotherapists must have internships in hospital departments, ICU, CCU, schools and kindergartens, elderly care centers, specialized children's hospitals, neurology, orthopedics, cardiovascular, rheumatology and dermatology clinics, obstetrics and gynecology, clinics, health centers, *etc*., to gain qualifications in all these areas. It is impossible and unrealistic for a basic level physiotherapy student to learn all of these areas of practice in four years of education (6). For this reason, leading countries in community health promotion have upgraded the basic physiotherapy level to Doctor of Physical Therapy (DPT) instead of a Master's degree. In the United States, physiotherapy has been upgraded from a bachelor's degree to a general doctorate since 1996. In Australia, the professional doctorate of physiotherapy was approved in 2009, and in Canada, it was approved in 2011 (4,5). In a study conducted in the United States by Warren *et al*, the characteristics of Bachelor's and Master's degree physiotherapy students were compared with each other. The researchers found that in the Master's program, patient care skills did not improve, and only research, education, and self-referral patient management improved. Such studies have opened the way for changing the basic level to a professional DPT instead of a Master's degree (5).

The MHTME neglect of educational justice prevents equal access and equality for all in education and equal success and learning retention for everyone. The disregard of the MHTME disregard for educational justice impedes equal access to education and equality in permanence, success, and learning for everyone. In the academic environment of Iran, students do not have equal access to human resources, space, and facilities. Clinical education plays a crucial role in providing quality physiotherapy services to the community through the development of skills and competencies that a bachelor's degree graduate must acquire during a four-year program. It is expected that this education, which is based on the content of a standard curriculum, will be taught in all rehabilitation faculties across the country based on the same content, process, and teaching method. However, this does not seem to be the case in practice. Therefore, more supervision is to ensure that the curriculum is implemented for educational equity. Patients' access to physiotherapy through a physician intermediary is another policy that has been imposed on the physiotherapy community in Iran, which has become the main factor causing hypocrisy between physicians and physiotherapists. Apart from the cost that this intermediary access imposes on patients and insurance companies, it is a major obstacle to improving the quality of health for patients. A systematic review conducted by Piscitelli *et al* in 2018 showed that patients' direct access to physiotherapists has increased the effectiveness of physiotherapy treatments and is also cost-effective. Furthermore, this access has not posed any risk to patients (17). In addition, a review article by Demont *et al* in 2021 reported that direct access to physiotherapists by patients resulted in less musculoskeletal disability, lower costs, and improved quality of life compared to access through a physician intermediary (18). However, there was no difference in pain outcomes between the two groups with and without physician intermediaries.

Although physiotherapists worldwide are dedicated to serving the public, and alongside other specialists, are striving to reduce disorders, improve activities, and increase patient participation, the MHTME has yet to recognize this profession and even other rehabilitation fields as a clinical science in Iran. It is clear that if this profession cannot provide appropriate and responsive services to patients due to its professional problems and challenges, and fails to address the needs of patients, the damage will be inflicted on the public. Therefore, a review of the regulations and rules of the DPT is necessary for the clinical recognition of the physiotherapy profession.

In the basic level curriculum of the physiotherapy field, 24 units of clinical internship and residency are included, which are taught to learners clinically in various hospital wards and outpatient clinics. At the end of the academic program, a clinical competency test is conducted by the teaching group, and if learners pass this test, they receive a physiotherapy license to provide independent medical services. Although all physiotherapy services are provided in hospitals, clinics, and even at patients' homes, it is unclear why and on what basis physiotherapy is classified as a basic science field in Iran.

Traditional teaching methods

The third barrier to the expansion of physiotherapy in Iran is traditional teaching methods that have been used by professors for a long time. Different teaching and evaluation methods exist based on Miller's learning pyramid for different levels of learning (29). Since most professors are mainly focused on providing content and enhancing the knowledge and understanding of students, they often use old teaching methods, such as lecturing, which do not result in the development of students' critical thinking skills, problem-solving abilities, and communication and teamwork skills. As such, students do not become lifelong learners, and always require a teacher or mentor to grow and develop personally. Furthermore, since basic science courses are taught separately from specialized and clinical courses, students never learn to connect the two. Additionally, in traditional teaching, argumentation and clinical decision-making skills are not taught for the diagnosis of physiotherapy and the treatment or management of patients (7). In this regard, students cannot employ their clinical observation results, which are obtained from patient history, evaluation, and interpretation of imaging and laboratory reports, for differential diagnosis, clinical reasoning, and decision making. On the other hand, often the therapeutic methods offered are therapist-centered, and patients have little say in determining their therapeutic goals and priorities. Promoting problem-based teaching methods and patient-centered therapies based on ethical values, can increase responsiveness and accountability of therapists, and improve the quality of physical therapy services.

In recent years, much attention has been paid to interdisciplinary collaboration in medical education as it increases the efficiency of clinical care teams and improves the quality of services provided to patients while also increasing patient satisfaction (30). Interactions between clinical education supervisors, students, and physicians in courses taught by a team of different specialists, as well as holding conferences and participating in medical grand rounds, also strengthen interdisciplinary collaboration in students (31). With the integration of the physiotherapy curriculum, this collaboration will appear naturally. Perhaps the weakness that physiotherapists have in interdisciplinary courses such as orthotics and prosthetics, dysphagia and orofacial disorders in neurological patients, cerebral palsy, and pelvic floor disorders is due to the lack of interdisciplinary collaboration. To develop the field, it is necessary to collaborate with rehabilitation team members and strengthen interdisciplinary courses by collaborating with technical orthopedic groups, speech therapists, occupational therapists, obstetricians and gynecologists, ENT specialists, and other physicians (32).

Another obstacle to the development of physiotherapy and the provision of quality services is the limitation of physiotherapists in using scientific evidence to improve clinical performance. To acquire this ability, familiarity with research methods in rehabilitation and critical appraisal of articles is necessary, which is not possible at the undergraduate level of physiotherapy. Therefore, it seems that promoting the level of education of physiotherapists at DPT and master's levels is a solution to this problem.

Evaluating students determines the level of achievement of the curriculum. It also demonstrates the competence and ability of the graduate. In addition, with exams, students discover their weaknesses and strengths. Therefore, the quality of evaluation methods and their implementation is important. According to graduates, in current conditions, student evaluation methods are not standardized and are often subjective. For example, in some universities, oral or written exams at various levels of Bloom's taxonomy are used to evaluate student performance in internships, and there is no clinical reasoning exam for students (5). It seems that the participation of professors in medical education courses and familiarizing clinical

education supervisors with tools and methods for evaluating student clinical performance is very important (19).

Another weakness of graduates is in collecting medical documents and records. The medical record is a valid document that provides the possibility of evaluating the quantity and quality of services, establishing effective communication between service providers, transferring appropriate information between all units and service providers, and continuing care during hospitalization and after discharge. The medical record plays a role as the foundation for recording all service delivery standards to the patient; supporting the legal rights of the patients, hospitals, and service providers; promoting research and quality management of services; and reimbursing costs. Without documentation of this record, the quality of services provided will not be recognized (33). Perhaps the main reason for the weakness in collecting documents is that the quality of services is not very important. In fact, there is a lack of standardized supervision and quality control measures for the services provided by physiotherapists and other specialists in Iran. In addition to that, physiotherapists do not face consequences for providing low-quality services. The limitation of this study, like all qualitative studies, is the inability to generalize its results.

Conclusion

Incorrect policies of the " MHTME ", failure to adhere to professional ethical standards and traditional teaching due to poor training and supervision, are main obstacles against progress of physiotherapy in Iran. To reach global standards in this field, fundamental changes are necessary.

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Conflict of Interest

There is no conflict of interest.

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