

Research Paper: Exploring the Challenges of Physiotherapy Clinical Education: A Qualitative Study



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ABSTRACT

Objectives: Clinical education is an important component of physiotherapy education. The students' and clinical educators' viewpoints about different aspects of education are being analyzed worldwide for the promotion of educational services. The aim of this study was to identify the challenges of clinical education based on the experiences of physiotherapy students and educators.

Methods: A qualitative study was conducted using content analysis method. Data were collected through semi-structured interviews using a purposeful sampling method with a maximum variation based on some factors like first-hand experience, expertise, and their willingness to participate in this research. Data collection was continued until the point of data saturation was attained. The participants included 17 senior physiotherapy students and nine clinical educators with over three years of experience.

Results: After verbatim transcription of the interviews and data analysis, 360 initial or open codes were extracted. The related codes were derived from the students' and clinical educators' experiences and challenges and were categorized into three concepts: A. Personal and professional characteristics of physiotherapy students; B. Personal and professional characteristics of clinical educators; and C. Inefficient educational system.

Discussion: Clinical education efficiency requires a common understanding of the long-term complications involved in addressing the existing barriers. Understanding these challenges can equip the policy makers and educational planners of physiotherapy departments with valuable information for improvement in the quality of physiotherapy clinical education and preventing oversight of clinical education and programs. Thus, the study emphasized the need for comprehensive management for policy makers and educational planners and recommended further research.

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1. Introduction

Universities play an important role in training experts of various disciplines needed in a society. In the current academic era, the experience of both educators and students of all disciplines is of vital importance. Carrying this vision greatly influences the level of education in the universities. These field experiences shared by educators and students can provide valuable information for education planners. [1, 2].

Clinical education is one of the most important fields in physiotherapy. In this teaching, students in interaction with their trainer and clinical environment exercise what they have already learned before [3]. In clinical education, a combination of practical and theoretic training has got an important role in shaping abilities of the students. Studying a Bachelor degree in physiotherapy enables the students to participate in different clinical fields. Nowadays, developing a high-quality clinical education program to fulfill students' needs is getting tougher [4, 5].

Based on the previous studies concerning quality of clinical education in other courses, some problems such as loss of programming, inadequate equipments, insufficient clinical abilities of students, inappropriate trainers, insufficient student assessments, impractical teaching, deficiency of practical training, lack of student motivation to learn, irresponsibility and irregularity of student and clinical trainer, and poor university supervision and management have been identified [6-12].

The University of Social Welfare and Rehabilitation Sciences (USWRS) hold the responsibility of educating experts in the field of rehabilitation. These students must be able to understand the needs of the disabled people as well as solve their physical, personal, and social problems. In this case, the USWRS educators should take into account students and trainers experiences in order to improve clinical training [11].

Therefore, it is very important for the universities to conduct a continuous assessment of clinical training, especially in physiotherapy, as it can help improve the quality of education. Also, successful clinical training requires considering the present situation, identification of strengths and correcting weak points [8, 9]. Therefore, the present study was conducted considering the importance of the clinical training for bachelor students and some prevailing concerns like lack of enough researches in this field, specific problems in the field of clinical training faced by USWRS, and lack of qualitative stud-

ies in this context. Overall, this study aimed at identifying the barriers to clinical education in physiotherapy.

2. Methods

Study design

A qualitative approach using content analysis was employed in this study. In this method, the required data were gathered directly from the participants, without any previous hypothesis. Knowledge was obtained on the unique perspectives of the participants.

Setting and participants

The participants were selected from some of the training clinics of University of Social Welfare and Rehabilitation Sciences (USWRS) using a purposeful sampling method with a maximum variation based on first-hand experience, expertise, and the willingness of participants to be a part of the research. Data collection was continued until the point of data saturation was attained. The participants included 17 senior physiotherapy students and nine clinical educators with above three years of experience in the relevant field.

Data collection

Semi-structured interviews were utilized to gather data. Data gathering was conducted by the main researcher through interviews from August 2016 to January 2017. Before the interviews, by introducing the aim of the study, the researcher obtained the informed and written consent from participants. The interviews lasted for 15 to 45 minutes and were tape recorded and transcribed verbatim. Each interview started with a broad question about "Participants perception and experience of barriers to clinical education in physiotherapy." Probing was conducted according to reflection of each participant on rehabilitation services, such as perception of the clinical education in physiotherapy and their needs, and the challenges to providing physiotherapy services in the field.

Data analysis

Qualitative content analysis was used to analyze the data. The study process was continued, and concurrent analyses were undertaken. First, recorded interviews were transcribed verbatim. Second, before coding, the transcribed text was read several times for familiarization. Codes and categories were extracted by two researchers using an inductive process with an open coding

through reading of the text followed by the assignment of related codes to them.

Ethical considerations

The aims of the study, researcher's identity, and private interview condition were explained to participants. Before participating in the study, all participants signed an informed consent form approved by the human subjects committee of University of Social Welfare & Rehabilitation Sciences (USWRS). The designated time and place of the interview were identified according to participant's willingness. Participants were informed about sound recordings during the interview, and they were ensured that their identity would be safe. Interviewer started the dialogue using a number of guidance questions which were specifically designed for this purpose.

3. Results

In this study, 17 senior physiotherapy students and nine clinical educators participated. A total of 26 interviews were conducted. By analyzing the data, 360 initial or open codes were extracted (230 code of interviews with students and 130 code of interviews with clinical trainers). After deleting the irrelevant codes and combining the similar codes, the following sub categories and categories were formed. Some demographic characteristics of participants are shown in Table 1. Table 2 shows (the results of the analysis of data from interviews with students) 10 sub categories extracted as follows: lack of responsibility of clinical trainer, insufficient clinical skill of trainer, lack of responsibility of students, insufficient clinical skill of students, lack of professional ethics, lack of planning, inadequate theoretical training, inadequate practical training, lack of training supervision, and unsuitable training environment.

Also, as shown in Table 3 (the results of the analysis of data from interviews with clinical trainers) 11 sub categories were extracted as follows: lack of responsibility of clinical trainer, insufficient clinical skill level of trainer, lack of students discipline, inadequate participation of students in education, lack of practical knowledge in students, poor theoretical training of some trainers, poor practical training of some trainers, lack of planning, unsuitable training environment, lack of specific curriculum and educational approach, and poor management of clinical training programs. Finally, as shown in Tables 2 and 3, data analysis resulted in the formation of the following three categories: personal and professional characteristics of clinical educators, personal and professional characteristics of students, and inefficient

educational system. The data were analyzed to extract key concepts. The main categories have been described in detail below:

Personal and professional characteristics of clinical educators

This category consists of the following two sub-categories: lack of responsibility of clinical trainer and insufficient clinical skill level of trainer. For example, one of participant described the lack of responsibility and motivation of some of clinical educators as follows: "while few teachers are responsible, some of the teachers are often absent in both clinical and theory courses" (Student, Personal interview, Date). In the case of insufficient clinical skill level of trainers, one of the participants mentioned: "any time we ask a question they ask us to find the answer ourselves, they easily presume that we are not trying hard enough but never consider whether they are doing their best or not" (Student, Personal interview, Date)

Personal and professional characteristics of students

This category consists of the following sub-categories: lack of student's discipline, inappropriate participation of students in education, lack of student's practical knowledge, and lack of professional ethics. Motivation and self-activity is an important factor in the progress of a student. To clearly cite the case of student's irresponsibility, an educator shared the following issue: *most of the students nap in the class and won't participate in class or they are playing with their phones* (Educator, Personal interview, Date).

To cite the case of lack of student's practical knowledge, one of the participants stated: *most of the students don't have enough knowledge because they often just study a night before the exams with an expectation of securing just the pass marks* (Educator, Personal interview, Date). Proper training should be combined with trainers respect to student. Further, to cite the case of lack of professional ethics, a participant explained: *in some training centers, the students are humiliated; for example, some trainers often criticize students by asking them questions like: If you passed these courses, why you do not know?* (Student, Personal interview, Date).

Inefficient educational system

It consists of the following sub-categories: Inadequate theoretical and practical training, lack of training supervision, unsuitable training environment, lack of specific

Table 1. Describing the study participants

Participants Experiences		Sex		Age (Year)	Number
Clinical Educator (Year)	Student (Semesters)	Male	Female		
	3		×	23	1
	2		×	21	2
	2		×	22	3
	3		×	20	4
	2		×	21	5
	2		×	21	6
	3		×	21	7
	3		×	20	8
	2		×	20	9
	3		×	21	10
	4	×		22	11
	2	×		20	12
	2	×		21	13
	4		×	24	14
	4		×	22	15
	4		×	24	16
	3	×		23	17
17		×		48	18
8		×		47	19
15		×		35	20
5			×	37	21
4			×	27	22
23			×	49	23
12		×		40	24
10		×		49	25
8		×		42	26

Table 2. Categories and sub-categories derived from interviews with physiotherapy students

Category	Sub-Category
Personal and professional characteristics of clinical educators	Lack of responsibility of clinical trainer
	Insufficient clinical skill level of trainer
Personal and professional characteristics of students	Lack of responsibility of students
	Insufficient clinical skill of student
	Lack of professional ethics
Inefficient educational system	Lack of planning
	Inadequate theoretical training
	Inadequate practical training
	Lack of training supervision
	Unsuitable training environment

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curriculum and educational approach, and poor management of clinical training programs. It is very necessary for the students to be well prepared in terms of theoretical courses which in turn are extremely important for preparing them for clinical educations too. Therefore, it is concluded that appropriate theoretical training can increase the quality of clinical education. To cite the case of inadequate theoretical training, a participant said: *the contents of theoretical courses that we have been taught*

are not enough to meet the expectations of the clinical educators (Student, Personal interview, Date).

Also, inadequate practical training was the main concern of many students. In this context another participant mentioned: *It is better to conduct practical training parallel with the theoretical training in every semester. For example we have learnt the theory of respiratory diseases but we haven't passed the practical part yet, or we*

Table 3. Categories and sub-categories derived from interviews with physiotherapy clinical trainers

Category	Sub-Category
Personal and professional characteristics of clinical educators	Lack of responsibility of clinical trainer
	Insufficient clinical skill level of trainer
Personal and professional characteristics of students	Lack of students discipline
	Inadequate participation of students in education
	Lack of students practical knowledge
Inefficient educational system	Poor theoretical training of some trainers
	Poor practical training of some trainers
	Lack of planning
	Unsuitable training environment
	Lack of specific curriculum and educational approach
	Poor management of clinical training programs

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have been taught practical part of electrotherapy only in one session (Student, Personal interview, Date).

Also, one of the major challenges of clinical education is the lack of clinical education planning. In this case, a participant described the issue in the following manner: *We don't have fixed training centers. There are several students who do not go to some of the centers and most of the students choose training centers themselves* (Student, Personal interview, Date).

Accurate and purposeful evaluation is an important component of each training process. Academic supervision and continuous evaluation not only ensures the quality of education but also provides reliable feedback from the performance of the student or educator. In this regard, one of the participants stated: *only two professors of the department as a clinical trainer are acceptable. I think more number of teachers should be executing the duty of supervision* (Student, Personal interview, Date).

Appropriate training environment with the integration of theory with practice is one of the prerequisites needed for professional training of students. In this context, a participant mentioned: *our training centers are few and existing centers are not specialized. For example, we don't have any training centers specialized in field of cardiology, pediatrics or surgeries* (Student, Personal interview, Date).

Also one of the issues mentioned by clinical trainer, which is effective in clinical education, was lack of specific curriculum and educational approach. In this context, a participant said: *training in each training center is very personalized and different. This variation is not optimal, because it shows irregularity and personalized approach in clinical education* (Educator, Personal interview, Date).

To achieve educational goals, proper management in all effective processes in clinical education including planning, execution, and getting timely feedback are necessary. In this context, another participant mentioned: *the main purpose of academic clinical centers should be to educate students, not other things such as earning income* (Educator Personal interview, Date).

4. Discussion

By encoding the data of interviews, three themes emerged: personal and professional characteristics of clinical educators, personal and professional characteristics of students, and inefficient educational system.

Learning of clinical skills is an essential component in educating physiotherapy students. It is necessary for clinical planners to know what specific factors are important to increase learning these skills [1, 2]. Clinical educators are generally responsible for facilitating the acquisition of profession-specific skills by student during the practical sessions and on-field training. During this time, the relationship between the clinical educator and student is considered fundamental to the success of the clinical training program [4, 5]. According to the results of this study, the participant's believed that personal and professional characteristics of clinical educators such as: the ability to transfer skills to students, responsibility, having high clinical skill and professional ethics are effective factors in clinical training.

Also, a successful clinical education requires that educators collaborate with students to ensure they are provided with opportunities to be self-directed and that they develop a rich learning experience [2]. For the student, this requires that they are well prepared in terms of theoretical and practical courses in clinical learning prior to a specific clinical experience [4]. In agreement with previous studies, our results showed that desirable personal and professional characteristics of students such as: good communication skills, eagerness to learn, empathy, and possessing a good knowledge base enhances the chances of better student engagement and development of a healthy relationship between the student and educator [4, 6, 8, 9].

Abdi et al. [7] conducted a study with the aim of designing valid indexes for assessment of clinical education in rehabilitation courses. They found that one of the most important determinants of clinical education is trainer skill level and students performance. Also, the results of a descriptive study conducted by Taheri et al. [13] showed that among the factors affecting clinical education, personal and professional characteristics of clinical educators and students have significantly higher score than other factors. Therefore, according to results of this study and previous studies, personal and professional characteristics of clinical educators and students is the most important factor in clinical education, which must be considered in clinical education planning.

Another result of this study was the adverse impact of unsuitable training environment on clinical education. An optimal training environment consists of: having appropriate space, adequate medical equipment and wide variety of patients [8, 9]. In this case, the clinical educators and students believed that their university had fewer training centers than actually needed and most importantly, lacked different specialized fields of medicine,

which resultantly made the training courses repetitive and tedious. In agreement with our result Kamali et al. [8] and Dashtgheibi et al. [9] also found that features of training environment is one of the effective factors of quality clinical education.

Also, according to the view points of the study participants, other educational challenges are lack of clear planning and specific curriculum and educational approach in clinical training, which often leads to personalized and dissimilar training patterns in each center. Kamali et al. [8] and Zamanzadeh [14] in their studies suggested that planning is a primary base of any training program and it can provide an effective learning.

The present study also showed that lack of training supervision and appropriate clinical evaluation are the two most important factors that determine whether learning has occurred or not. This result is in agreement with the findings of studies conducted by Abdi [10], Safavi-Farokhi [15], and Kamali [8]. They also believed that assessment is like capturing image of the moments of clinical practice, which can show what happened during the training sessions. Therefore, to achieve efficient training it is necessary to assess present education condition constantly in order to identify the strengths and weak points of clinical education.

Therefore, it is recommended to use valid indexes for clinical training assessment in order to improve the performance of the existing education system. Also, based on the views of the participants, poor management and improper academic policy can be the origin of some clinical education problems. In this case, different factors like lack of university ownership on training fields, lack of a formal contract with used clinical fields of other universities, expecting income from clinical fields, using multi job trainers and increased tendencies of teachers to be involved in research instead of clinical education were considered as the most vital and effective in clinical education.

5. Conclusion

The study showed that personal and professional characteristics of clinical educators, personal and professional characteristics of students, and inefficient educational system are important factors greatly influencing the implementation of an effective clinical training program. An efficient clinical education requires a common understanding of the existing challenges for the improvement of the quality of physiotherapy clinical education.

The educational planners must change their outlook on clinical education and programs. In addition, the policy

makers and educational planners should realize the need for comprehensive management and recommended further research in the field of effective clinical education.

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Conflict of Interest

The authors declared no conflicts of interest.

References

- [1] Dean CM, Stark AM, Gates CA, Czerniec SA, Hobbs CL, Bullock LD, et al. A profile of physiotherapy clinical education. *Australian Health Review*. 2009; 33(1):38-46. doi: 10.1071/ah090038
- [2] Ernstzen D, Bitzer E, Grimmer-Somers K. Physiotherapy students' and clinical teachers' perceptions of clinical learning opportunities: A case study. *Medical Teacher*. 2009; 31(3):e102-e15. doi: 10.1080/01421590802512870
- [3] Delany C, Bragge P. A study of physiotherapy students' and clinical educators' perceptions of learning and teaching. *Medical Teacher*. 2009; 31(9):e402-e11. doi: 10.1080/01421590902832970
- [4] Knox GM, Snodgrass SJ, Stanton TR, Kelly DH, Vicenzino B, Wand BM, et al. Physiotherapy students' perceptions and experiences of clinical prediction rules. *Physiotherapy*. 2017; 103(3):296-303. doi: 10.1016/j.physio.2016.04.001
- [5] McMahon S, Cusack T, O'Donoghue G. Barriers and facilitators to providing undergraduate physiotherapy clinical education in the primary care setting: A three-round Delphi study. *Physiotherapy*. 2014; 100(1):14-9. doi: 10.1016/j.physio.2013.04.006
- [6] Changiz T, Malekpour A, Zargham-Boroujeni A. Stressors in clinical nursing education in Iran: A systematic review. *Iranian Journal of Nursing and Midwifery Research*. 2012; 17(6):399-407. PMID: PMC3733283
- [7] Seyyedi Iraj SA, Abdi K, Vameghi R, Safi MH. [Designing the valid indexes for assessment of situation of clinical education in rehabilitation courses (Persian)]. *Journal of Medical Education Development*. 2013; 5(9):23-32.

- [8] Kamali M, Dastgheibi SMR, Chabokk K, Dadgoo M, Gha-naatian S. [Physiotherapy students experiences from clinical education processes: A qualitative study (Persian)]. *Journal of Research in Rehabilitation Sciences*. 2013; 9(5):818-832.
- [9] Dastgheibi SMR, Kamali M, Dadgoo M, Chabok A. [Internal elements and external factors affecting physiotherapy clinical education from physiotherapy student's perspectives: qualitative study (Persian)]. *Journal of Research in Rehabilitation Sciences*. 2014; 10(3):393-407.
- [10] Abdi K, Maddah SSB, Rahgozar M, Dalvandi A. [Evaluation of educational situation of rehabilitation branches in welfare and rehabilitation university from the student's viewpoint in educational year 2003-2004 (Persian)]. *Archives of Rehabilitation*. 2007; 7(4):57-64.
- [11] Kariminejad AR, Vameghi R, Abdi K, Bakhahi E, Mohammadzadeh Z. [A comparison of the viewpoints of clinical educators and students of the university of social welfare and rehabilitation sciences toward clinical training status of rehabilitation disciplines in 2013-14 (Persian)]. *Strides in Development of Medical Education*. 2015; 12(3):485-495
- [12] Aein F, Alhani F, Anoosheh M. [The experiences of nursing students, instructors, and hospital administrators of nursing clerkship (Persian)]. *Iranian Journal of Medical Education*. 2010; 9(3):191-200.
- [13] Taheri AR, forghani S, Atapour S, Hassanzadeh A. [The effective clinical teaching from faculty members' and rehabilitation students' point of view (Persian)]. *Iranian Journal of Medical Education*. 2012; 11(9):1131-39
- [14] Zamanzadeh V, Abdollahzadeh F, Lotfi M, Aghazadeh A. [Assessing clinical education fields from the viewpoints of nursing and midwifery instructors in Tabriz University of Medical Sciences, 2006 (Persian)]. *Iranian Journal of Medical Education*. 2008; 7(2):299-307.
- [15] Safavi-Farokhi Z, Bakhtiary AH, Fatemi E, Hajihassani A, Amouzadeh-Khalili M. [Internal evaluation of physiotherapy department of Semnan University of Medical Sciences (Persian)]. *Koomesh*. 2011; 12(4):349-55.