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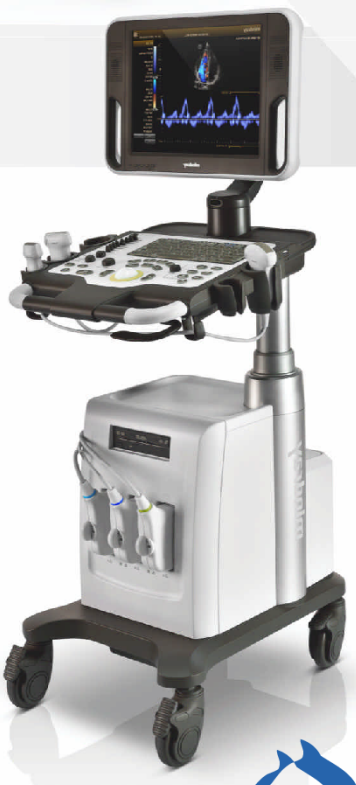

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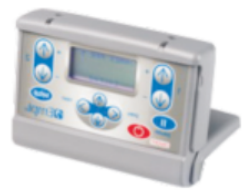

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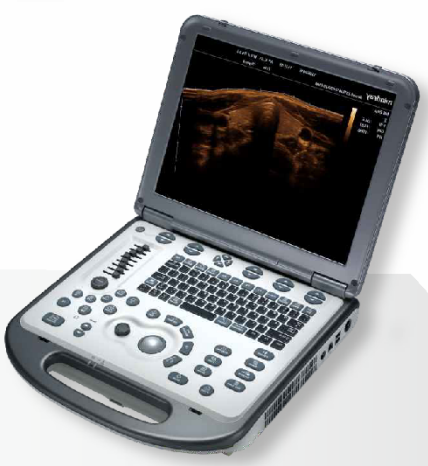

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Sukces czy porażka? Czyli jak wygląda sytuacja w zakresie szczepień ochronnych w Polsce?

Cztery uczelnie – Centrum Medyczne Kształcenia Podyplomowego, Warszawski Uniwersytet Medyczny, Akademia Leona Koźmińskiego i Uniwersytet SWPS zorganizowały konferencję naukową w ramach Projektu „Budowanie zaufania do szczepień ochronnych z wykorzystaniem najnowszych narzędzi komunikacji i wpływu społecznego".

Podczas czterech paneli dyskusyjnych eksperci, naukowcy, lekarze, psycholodzy, przedstawiciele instytucji publicznych dyskutowali na temat szans i wyzwań stojących przed system szczepień w Polsce.

Nie da się zaprzeczyć faktom – szczepienia ochronne są najefektywniejszą metodą zwalczania chorób zakaźnych. Podnoszenie zaufania do szczepień, które przekłada się na poziom wyszczepienia populacji, jest więc kluczowym wyzwaniem stojącym przed wszystkim odpowiedzialnymi za zdrowie publiczne w Polsce.

Dużym sukcesem i krokiem w dobrym kierunku było wprowadzenie szczepień w aptekach – podkreślił prof. Jarosław Pinkas, Konsultant Krajowy w dziedzinie zdrowia publicznego.

Niemniej, mimo szeroko prowadzonej kampanii medialnej, Polska należy do krajów o najniższym poziomie wszczepienia przeciw COVID-19 w Europie (niespełna 60% populacji zostało w pełni zaszczepionych). Co roku w naszym kraju przeciw wirusowi grypy szczepi się jedynie 4-6% osób. Według danych PZH-NIPZ liczba uchyleń od szczepień obowiązkowych wśród dzieci w okresie od 2016 do 2020 roku wzrosła 2-krotnie z 23 tys. do 50.5 tys.

„Szczepienia przeciwko grypie u pracodawców bardzo zmniejszają absencję w pracy, ta sama prawidłowość dotyczy szczepień rotawirusowych" – mówił prof. Marcin Czech

Z danych uzyskanych przez Warszawski Uniwersytet Medyczny wynika, że postawy mieszkańców Polski wobec szczepień nie są spójne. Może to w przyszłości spowodować dalszy spadek poziomu wyszczepienia populacji, a w dalszej perspektywie wzrost zagrożenia epidemiologicznego.

W ramach panelu prowadzonego przez Uniwersytet SWPS zastanawiano się nad przyczynami postaw wobec szczepień. Pierwszym skojarzeniem, jakie większość Polaków wypowiada po haśle „szczepienia" jest „koronawirus". I choć rzeczywiście od końca 2020 roku szczepienia przeciwko COVID-19 stały się jednym z bardzo ważnych elementów debaty publicznej, to przecież rosnąca liczba osób uchylających się od szczepień na takie choroby jak odra czy krztusiec była ważną kwestią społeczną już przed marcem 2020 roku.

Jednym z kluczowych wyzwań stojących przed system szczepień w Polsce jest walka z fake newsami, podkreślali eksperci Akademii Leona Koźmińskiego.
Czy dezinformację naukową można interpretować w kategoriach cyberwojny?
Czy jest to zagrożenie porównywalne z katastrofą klimatyczną, bądź rozwojem technik AI? Jaką rolę odgrywają w tym procesie media społecznościowe? To pytania z którymi musimy się jak najszybciej zmierzyć.

Mimo wszystko wysoka wyszczepialność w Polsce to sukces wszystkich profesjonalistów medycznych i osób działających na rzecz zdrowia publicznego. Wciąż zdecydowana większość Polaków dokonuje właściwych wyborów zdrowotnych. To optymistyczny wniosek płynący z konferencji CMKP, WUM, SWPS i ALK. Jednak nic nie jest dane raz na zawsze – pojawiające się wyzwania powinny mobilizować lekarzy, naukowców, edukatorów, przedstawicieli administracji publicznej do szukania nowych sposobów dotarcia z komunikatem zachęcającym do szczepień i podejmowania zdecydowanych działań na rzecz walki z dezinformacją.

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Factors affecting physiotherapy clinical education: Perceptions of students and clinical educator

Czynniki wpływające na edukację kliniczną w zakresie fizjoterapii: Ocena studentów i edukatora klinicznego

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Abstract

Introduction. Clinical education is the cornerstone of physiotherapy education. Clinical educators play a pivotal role in shaping students' attitude towards their future role as physiotherapist. But the implementation of physiotherapy clinical education varies significantly between institutions. Research has shown several factors influencing the clinical education.
Aim. To explore the factors affecting physiotherapy clinical education.
Methods. This research used mixed-methods approach and recruited participants through purposive and convenience sampling. Data was collected through a survey using questionnaire and face-to-face interviews. Thirty-four physiotherapy students completed a satisfaction survey questionnaire after attending 12 weeks of clinical placements. Twenty-six clinical educators and 9 students participated in the interview. Descriptive statistics including frequency percentage, median and percentiles were used for quantitative data analysis. Thematic analysis method was used for qualitative data analysis.
Results. Quantitative study found greater student satisfaction in clinical education. But the qualitative study identified several factors affecting clinical education in the context of this study. These factors include student interest, learning style, culture, and ability to cope with challenges. In addition, clinical educator workload, teaching strategies, curriculum knowledge, academic-clinical partnership, peer learning, placement model and expectations were the other factors that influenced physiotherapy clinical education.
Conclusions. The findings of this study are useful to physiotherapy clinical educators, students, and faculty. It provides insight into various factors affecting physiotherapy clinical education. Furthermore, it recommends evidence-based strategies to neutralize those factors influencing clinical education.

Keywords

clinical placements, clinical education, physiotherapy

Streszczenie

Wprowadzenie. Edukacja kliniczna jest podstawą edukacji fizjoterapeutycznej. Edukatorzy kliniczni odgrywają kluczową rolę w kształtowaniu postawy studentów wobec ich przyszłej roli fizjoterapeuty. Jednak wdrożenie edukacji klinicznej w zakresie fizjoterapii różni się znacznie między instytucjami. Badania wykazały kilka czynników wpływających na edukację kliniczną.
Cel. Zbadanie czynników wpływających na edukację kliniczną w zakresie fizjoterapii.
Metody. W badaniu wykorzystano podejście metod mieszanych i rekrutowano uczestników poprzez celowe i wygodne pobieranie próbek. Dane zebrano za pomocą ankiety z wykorzystaniem kwestionariusza i wywiadów bezpośrednich. Trzydziestu czterech studentów fizjoterapii wypełniło kwestionariusz po odbyciu 12-tygodniowego stażu klinicznego. W wywiadzie wzięło udział 26 edukatorów klinicznych i 9 studentów. Do analizy danych ilościowych wykorzystano statystyki opisowe, w tym procent częstotliwości, medianę i percentyle. Do jakościowej analizy danych wykorzystano metodę analizy tematycznej.
Wyniki. Badanie ilościowe wykazało większą satysfakcję studentów z edukacji klinicznej. Jednak badanie jakościowe zidentyfikowało kilka czynników wpływających na edukację kliniczną w kontekście tego badania. Czynniki te obejmują zainteresowanie studentów, styl uczenia się, kulturę i umiejętność radzenia sobie z wyzwaniami. Kolejne czynniki, które wpłynęły na edukację kliniczną w zakresie fizjoterapii to obciążenie pracą edukatora klinicznego, strategie nauczania, wiedza programowa, partnerstwo akademicko-kliniczne, nauka poprzez wymianę wiedzy i doświadczeń, model stażu i oczekiwania.
Wnioski. Wyniki badania są przydatne dla edukatorów klinicznych w zakresie fizjoterapii, studentów i wydziałów. Prezentują różne czynniki wpływające na edukację kliniczną w zakresie fizjoterapii. Ponadto autorzy badania zalecają stosowanie strategii opartych na dowodach w celu zneutralizowania czynników wpływających na edukację kliniczną.

Słowa kluczowe

staże kliniczne, edukacja kliniczna, fizjoterapia

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Introduction

Clinical education is the heart of physiotherapy education and this has a powerful effect in shaping students' attitude for professional practice and is of paramount importance to link the theory to practice [1]. Physiotherapy clinical educators use various strategies to teach students in clinical settings. Peer coaching, supervised practice, role playing, and questioning are some of the popular strategies used for clinical instruction [1]. However, there are no standardized clinical education approaches to recommend to physiotherapy clinical educators. The real-life experience is vital to crystallize therapeutic skills. Supervised practice support the learner to develop professional skills, competence and autonomy [2]. But the conceptualization and delivery of clinical education significantly varies across the globe which may affect the placement expectations. Providing optimal learning opportunities will help students to develop clinical skills and attain the attributes of a physiotherapist. However the rapidly changing healthcare systems and the complexities in providing seamless interface may reduce the opportunities for students. Several factors affect students learning in clinical settings and it include the model of clinical education, attributes of clinical educators, teaching strategies, performance evaluation tools and the environment [3]. The challenges for clinical education become multifold when students require additional support [4]. Clinical education usually occurs outside the university settings and the environment is often time constrained. Lack of human resources and the fiscal pressure associated with healthcare delivery may impact the clinical education [4]. A previous study identified clinical educators' distrust on students during clinical practice, lack of familiarity with professional ethics among hospital personnel and students' negative attitude towards their profession as the three main factors influencing nursing and midwifery clinical education [5]. Providing independence and opportunities to practice different tasks and giving feedback to the students are facilitating factors whereas distrust on students by supervisors, lack of continuity during supervision, lack of opportunities to practice and perception of the their own insufficiency by students were the obstructing factors identified by students in an earlier study [6]. There must be a strategic link between the curriculum delivered at the college level and the clinical education. The effective clinical education can be provided by improved faculty monitoring of clinical education when the colleges depend on preceptor model for student training. There is an identifiable gap that exists over the primary responsibility of clinical teaching. It is important to identify the alternate possibilities to organize clinical teaching and reduce the theory-practice gap [7]. The current models of clinical education include mentoring, collaborative, and shared responsibilities. The studies do not recommend any one approach and no model is superior to another. There is a need for research that evaluates the factors influencing the clinical education to improve the quality [8]. While studying the perceptions of students and clinical educators about factors affecting clinical education, the mixed model analysis is important to identify the contextual factors. The satisfaction surveys alone may not help in identification of these factors.

Aim

To identify the factors that affected physiotherapy clinical education in the UAE.

Methods

Study design

This research used mixed methods design. Initially, quantitative data was collected from physiotherapy students through online survey using a questionnaire. Then face-to-face interviews were conducted to gather information from students and clinical educators. Quantitative method was useful in finding out students' satisfaction with clinical education. Qualitative method was useful to gather participants' views about their lived experience in clinical education.

The context and location of study

This research was conducted in a health sciences institution in the United Arab Emirates. The undergraduate physiotherapy program was established in 2013 using Australian based transnational curriculum. First-year of the program focused on musculoskeletal physiotherapy and the second year included neurological and cardiorespiratory physiotherapy. Advanced physiotherapy practice modules formed half of the third year and the remaining 18 months of the program involved clinical education. Clinical education structured as blocked placements and students attended fulltime placements covering core, advanced and elective areas of physiotherapy practice. Physiotherapy program was taught in English language and institution admitted only female students. Clinical education was organized in affiliated teaching hospitals including both public and private healthcare sectors providing acute, sub-acute and long-term care services. Students were supervised by physiotherapists employed at the hospitals. Participants' first language varied. Almost all students were native Arabic speakers whereas clinical educators spoke different first languages. The medium of instruction for clinical education was in English. However, students often communicated in Arabic as patients were predominantly Arabic speakers.

Participant recruitment

Purposive sampling was used to recruit the participants for quantitative study. All 34 students who completed 12 weeks of clinical placements were asked to complete the survey. Qualitative study used convenience sampling to recruit participants. A total of 9 students and 26 clinical educators were willing to participate and all were interviewed. Participant profile are presented in Tables 1 and 2.

Ethical considerations

The principal investigator (PI) was familiar to most of the participants through his role as lecturer. Hence, there was an ethical dilemma due to potential power relationship [9]. However, the PI did not influence participants' decision to participate or not participate in this study. In this study, the PI was involved in conducting an in-depth study of participants experiences and understand their feelings. Participants were enabled to express their feelings based on their lived experience in practice placements. In addition, participants were encouraged to answer qu-

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Table 1. Student profile

Participant profile		Number	Percentage
Level	Fourth year	18	53%
	Final year	16	47%
Placement location	Al Ain	22	65%
	Abu Dhabi	12	35%
Sex	Female	34	100%
	Male	0	--
Age group	20–22	18	53%
	23–25	16	47%
First language	Arabic	34	100%
Nationality	UAE	19	56%
	Expatriates	15	44%
Placement focus (covered in 3 rotations)	Musculoskeletal	34	100%
	Neurology	31	91%
	Pediatrics	27	79%
	Cardio-respiratory	11	32%
	Medical & Surgical	21	62%
Academic performance	Lowest cGPA	2.00	--
	Highest cGPA	3.90	--

Table 2. Clinical educator profile

Participant profile		Number	Percentage
Gender	Male	10	38%
	Female	16	62%
Place of work	Public sector	13	50%
	Private sector	13	50%
Qualification	Bachelor's degree	21	80%
	Master's degree	5	20%
Country of qualification	India	7	28%
	South Africa	4	15%
	Egypt	4	15%
	United Kingdom	2	7.5%
	Ireland	2	7.5%
	Philippines	2	7.5%
	Jordan	2	7.5%
	USA	1	4%
	Australia	1	4%
	Pakistan	1	4%
Years of Experience in Clinical Practice	Minimum	5	
	Maximum	32	
Years of Experience in Clinical Education	Minimal	2	
	Maximum	12	

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estions in an authentic, honest, and open manner. Power dynamics was balanced at various stages of this study, as researchers sought approval from the Institution's Research Ethics Committee, protected participants' privacy, and anonymity, and ensured open communication during interviews to allow the freedom to express. The PI showed respect and empathy for all participants and provided a comfort zone during the data collection process. In addition, the PI rechecked the verbatim transcripts with participants to validate their expressions in the interview. The PI was self-critical throughout the process of conducting this research and ensured that personal bias did not influence the interpretation of findings. The PI showed reflexivity while interpreting results of the study and discussed research implications by making assumptions [9]. All these measures have minimized the bias.

Quantitative study procedure

A questionnaire was developed based on the tool designed to evaluate nursing students' perception about clinical education experience [10]. The questionnaire consisted of 13 items about learning outcomes, clinical educator, supervision, environment, and feedback (appendix 1). Likert scale (0-strongly disagree to 5-strongly agree) was used to provide a response to each item. Questionnaire was piloted with selected students, faculty, and experts in the field to establish face and content validity.

Questionnaire was administered through an online survey using Google Forms. An email invitation with the survey link was sent to all physiotherapy students who have completed 12 weeks of clinical placements in the first semester of core and advanced clinical education. Survey results were in text-numeric form, and it was converted to numeric form for analysis in SPSS. Descriptive statistics including median and inter quartile range were used for quantitative data analysis.

Qualitative study procedure

At the time of the study, the PI was pursuing PhD and worked as a lecturer whereas the other author was PhD qualified and worked as Assistant Professor and both were males. Authors possessed adequate training in both quantitative and qualitative research methods, and they have been teaching physiotherapy for more than a decade. Phenomenology research design was used to understand the factors affecting clinical education. Therefore, individual interviews were used to explore participants' lived experience. A sample of convenience was used to recruit the participants. An invitation explaining research purpose was emailed to students and clinical educators. The response was limited from students to take part in the interview after two reminders. All students were females and represented traditional Arabic culture which might have been a factor for limited response. Among the 34 students who took part in the survey, only 9 were willing to participate in the qualitative study. Researchers believed that participants' perceptions about the effectiveness of clinical education would be useful to validate quantitative study findings.

All willing students (n = 9) and clinical educators (n = 26) were interviewed. The PI conducted all interviews. One-to-one interview was arranged in privacy at the convenient place of participants. Separate interview guides were developed and piloted with two educators and two students. Their feedbacks were incorporated into the final interview guide. Participants consented to audio record their interviews. Additionally, researcher made field notes. Interviews lasted approximately 30 minutes long on average. The PI briefed field notes to participants at the end of the interview to cross-check accuracy of information. Interviews were transcribed verbatim and returned to participants for validation. There was no requirement for repeat interview at this stage. The PI did not see data saturation which forced to interview all willing participants. Limited number of student participants and clinical educators representing different sites were the possible reasons that data saturation did not occur in this study.

Analysis of qualitative data was performed using NVivo 12 software. Student and clinical educator interview transcripts were analyzed separately. Initially, auto-coding was conducted to identify related concepts from transcripts. This produced numerous concepts because the software identified repeated words and phrases as codes. The intention was to identify concepts from participant response and therefore, the researchers chose manual coding option using the same tool. The researchers independently and thoroughly read the interview transcripts. Highly related concepts were categorized as nodes in NVivo. Repeated reading of those nodes for further analysis identified three major themes for discussion. Extracts of participant interview transcripts were quoted to illustrate the qualitative study findings and were presented under each theme. To protect participant identity, mock identifiers CE# for clinical educator and ST# for student were used in the order of interview. For example, the first clinical educator was identified as CE1 and the first student as ST1.

The research purpose was to explore factors affecting clinical education in the United Arab Emirates. Therefore, it was important to understand the participants' experiences, feelings, and opinions. Interviews were useful and effective to gather these information [11, 12]. Thematic analysis helped to gain deeper insight into the research problem [13].

Results

Majority of students were highly satisfied with their clinical education experience. The survey findings showed that students learning needs were met, and that they received good support and supervision. Participants reported high level of satisfaction as majority of responses were between agree to strongly agree on all the items of survey tool. Percentage of participants response to each item of the questionnaire on Likert scale is presented in Table 3.

Median, minimum, maximum and percentile statistics for each item of the questionnaire are presented in the Figure 1.

Findings of the qualitative study showed several factors affecting physiotherapy clinical education in the United Arab Emirates. Those factors were related to students, clinical educators and other academic aspects of physiotherapy program delivered at the host institution. Factors affecting clinical education are presented under these three themes. Extracts of participant interviews were useful to interpret and report the qualitative study.

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Table 3: Students' perspectives about clinical education

Items	No.	5	4	3	2	1	Total
Provided with the objectives of the clinical placement on the first day	34	35%	56%	3%	6%	0%	100%
Clinical education is in alignment with the objectives of the placement	34	35%	47%	9%	6%	3%	100%
There is a link between educational objectives and expectations of the clinical educators from students	34	32%	62%	3%	3%	0%	100%
There is compatibility between theoretical curriculum and clinical activities	34	26%	53%	15%	0%	6%	100%
Clinical educator provides full support to students	34	26%	53%	12%	6%	3%	100%
Clinical educator deal with student effectively	34	23%	56%	15%	3%	3%	100%
Clinical educator has a good understanding of the physiotherapy curriculum that students' studied at their University/College.	34	23%	47%	18%	12%	0%	100%
Clinical educators have necessary cooperation with students.	34	21%	71%	6%	3%	0%	100%
Clinical educators allow students to make decisions in patient care planning	34	29%	59%	9%	3%	0%	100%
There are sufficient number of patients for learning	34	26%	62%	6%	3%	3%	100%
There are enough facilities within the department as well as in the hospital	34	21%	65%	12%	3%	0%	100%
There is always a supervision during the clinical training	34	24%	62%	12%	3%	0%	100%
One to one performance evaluation of the clinical placement is provided	34	21%	68%	12%	0%	0%	100%

No. – Number of responses; 5 – Strongly agree; 4 – Agree; 3 – Undecided; 2 – Disagree; 1 – Strongly disagree

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13
N	Valid	34	34	34	34	34	34	34	34	34	34	34	34	34
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0
Median		4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Minimum		2.00	1.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	2.00	2.00	3.00
Maximum		5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Percentiles	25	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	3.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
	50	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
	75	5.0000	5.0000	5.0000	5.0000	5.0000	4.2500	4.2500	4.0000	5.0000	5.0000	4.0000	4.2500	4.0000

Figure 1. Median and IQR Statistics

Theme 1: Factors related to student

Student's interest, learning style, personality, culture, and the ability to cope with uncertain situations in clinical placements are the factors that affected their clinical education experience.

Interest

The placement focus did not match with students' interest. This was reported by several clinical educators and students. For example, below extracts from clinical educator and student show that students' interest is an important factor which affected their clinical education experience.

Our outpatient department focuses on musculoskeletal conditions and the inpatient focuses on neurological rehabilitation. I found some students were really interested in and willing to be in the outpatient's unit than inpatients. (CE 11)

In the last rotation I was in stroke unit. I didn't like neuro, so it was a bit difficult. (ST 5)

Learning style

According to clinical educators, individual student learning style was another factor that influenced their clinical education experience.

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I can't paint them all with the same brush. My last student was excellent but the one before that was not really very good. (CE 7)
You find students who are very inquisitive. On the other hand, there might be a passive student who would need a lot of prompts. (CE 25)

Culture
The local culture was another factor that affected clinical education in the context of this study. Students were all females and represented traditional Arabic culture. It was evident from participant interview quotes that students were very conservative and hesitant to handle male patients and work with male clinical educators.
I have seen many students expressed concerns to see a male patient. (CE 1)
I am man, so a female student takes more time to become familiar with me. When handling male patients there is some shyness. (CE 12)
I am a little bit shy in dealing with male patients especially if they are locals. (ST 5)

Coping with challenges
Students' ability to cope with challenging situation was also a factor that affected clinical education. According to clinical educators, each student's ability to cope with uncertainties was not the same and this affected their clinical education experience which was acknowledged by few students.
In one of the sessions we have had two students and me. Patient was not onboard with what the plan of treatment was, and in an agitated state, and was not agreeing with the plan of care. One student was leading the session at that time, she got nervous and almost gave up, and wouldn't want to talk to the patient at all. I think, she was just taken back by the whole situation and couldn't cope up with it. On the other hand, the second student did take over and she was able to really communicate with that patient in a way that the patient left the session agreeing to plan of care. (CE 25)
I treated patient with amputation and psychological issues, and I felt like crying. (ST 1)
Timing was not easy, and it was too long without break. (ST 6)

Theme 2: Factors related to clinical educator
Clinical educator workload, teaching strategies and knowledge of physiotherapy curriculum taught to the students were the factors belonging to clinical educators which affected clinical education.

Workload
According to clinical educators, it was hard for them to manage their dual role of providing health services and at the same time train students on site. Few students reported that their clinical educators did not provide adequate attention to their learning. Therefore, clinical educator workload was a major factor that affected clinical education in the given context.
When the clinical case load is so busy, the time you have for students is often prioritized off and sometimes you are trying to teach students at a particular time, but you might be pulled in several directions to attend MDT meeting and/or other things. (CE 16)
It's hard for us to have the main responsibility in fairness to students and the practitioner who must continue the same amount of work in the same quality with the added load of doing education to students. (CE 21)
Clinical educators don't concentrate on us. They concentrate more on the patients. (ST 7)

Teaching strategies
Inconsistency in teaching strategies applied by clinical educators was another factor that affected clinical education within the context of this study. Participants reported that bed side teaching and empowering students to make decisions were some of the strategies that enhanced clinical education experience for students, whereas unsupervised practice opportunities hindered their learning experience.
We make them do the presentation to the team. They reflect on their theory to a case and present. Often, we ask them to reflect why they made that decision and what their clinical reasoning is? (CE 9)
Sometimes they use to send me alone to see the patients, but I was scared and nervous. I understand that they want us to be confident, but we do not have much experience. (ST 2)
Some of the educators were friendly, flexible and welcoming. One therapist supported me in being independent but not all of them are same. (ST 3)

Knowledge of physiotherapy curriculum
Clinical educators reported that they were not fully aware of the physiotherapy curriculum taught at the college. Participant demographic information was useful to understand the diversity among clinical educators. They qualified from different countries and their experiences varied. Hence, it was vital for them to get in-depth background of what students have learnt at the university so that they can adapt the learning activities for students in clinical settings. Therefore, limited knowledge of physiotherapy curriculum for clinical educators was also a factor that affected clinical education in the UAE.
We don't know what they have learnt. I don't have enough knowledge and background of the curriculum and rely on the student information about their background. (CE 13)
We didn't have much information about what they have studied and learnt. (CE 23)

Theme 3: Other academic factors
Physiotherapy faculty involvement, placement expectations, clinical education model, and peer learning were the other factors from academic aspect that affected clinical education in the context of this study.

Physiotherapy faculty involvement in clinical education
According to clinical educators, academic staff were not involved in teaching and assessment of students in clinical education. Participants reported that faculty involvement would have strengthened clinical education. Clinical educators expected the academics to provide support to students to bridge theory-practice gap and jointly assess students' performance. In the

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given context, faculty were not involved in clinical education and this negatively affected clinical education.

We meet with the faculty clinical supervisors once a week, but it needs to be more of a practical session. Maybe we can do assessment and treatment session together with the student, so we can correct them. It would make the marking better way. (CE 4)

It would be better if somebody allocated to students with a dedicated time to go through specific topics and see patients with students within the protected time. (CE 16)

More faculty involvement is needed to focus on the student and to take the burden out the clinician. Perhaps they can observe the patient care and discuss about it. (CE 21)

Placement expectations

The findings showed that there was a mismatch in expectations among students, clinical educators, and the college. Clinical educators have reported that there were inconsistencies in the expectations set to them by the college regarding students' level of knowledge and skills. Similarly, students raised concerns about the way their clinical educators have graded their performance in clinical placements.

We were asked to consider them when they were in the fourth year, they like a new graduate but that level was not there. (CE 14)

If we could have an understanding about what we expect from students, so when they come, they already have some idea of what kind of conditions they are going to see, what type of a setting it is, so that is not so much of a shock. (CE 3)

Some of the educators put low marks without reasons even if the student did very well. But I want to know the reasons for low scoring so that I can work on those areas. (ST 5)

Clinical education model

Clinical educators reported that the placement duration was very short, and students expressed concerns with the unintegrated nature of placements. Shorter duration did not help students to settle in a new place. Additionally, placements did not run parallel to theory courses. Below quotes from participant interviews confirm that both these factors negatively affected clinical education.

Placement for 4 weeks are quite shorter. Students take some time to get oriented to the hospital, so, perhaps longer placements for 6 to 8 weeks may be the student would be more benefited. (CE 16)

We need more time, one month is not enough to achieve all the learning objectives. (ST 7)

I think the clinical placements should go along with the courses so that we can get real-time experience and benefit. For example, if we learn about assessment of a condition then we should simultaneously apply in real patients. (ST 5)

Peer learning

According to clinical educators, there was peer learning opportunities for students in clinical placement. This helped them to overcome difficult situations and promoted self-directed learning. Hence, peer learning was reported as one of the factors that positively influenced clinical education.

There is some self-directed learning when they are together and discussing cases. (CE 17)

The pairing helps because there are two of them, so they do not feel overwhelmed, and they always consult each other. So, it makes it more calming for them. (CE 3)

In this mixed methods study, findings of quantitative study showed high level of students' satisfaction with clinical education. Conversely, the qualitative study findings showed mixed responses and identified several factors affecting clinical education within the context of the study.

Discussion

In this study, culture was one the factors that affected physiotherapy clinical education. Female physiotherapy students' cultural restrictions were reported as a barrier for developing interpersonal relationships during clinical placements. Particularly students were not collaborating well with male patients and educators and this was due to their cultural beliefs and tradition. The institution is not a co-education place which did not help students to prepare for this experience. It is inevitable that health professionals like physiotherapists manage patients of both sexes. Therefore, it was vital for students to develop interpersonal skills without any restriction and clinical placements provided numerous opportunities for it. McBee and colleagues reported similar finding in their study in which culture was a major factor that influenced clinical education. Furthermore, their study recommended that educators should develop strategies to address cultural barriers in clinical placements [14]. Learning style and ability to cope with challenges were the other factors attributed to students that affected clinical education. Findings of previous research indicated that physiotherapy students preferred one of the four Kolb's learning styles. These include accommodating, assimilating, converging, or diverging style of learning [15]. A systematic review of physiotherapy learners' learning style concluded that physiotherapy learners prefer active participation [16]. Inability to cope with anxieties can affect learning and performance in clinical settings. Therefore, clinical educators must develop resilient measures to support students in clinical education. Delany and colleagues recommended to replace stressful challenges with positive coping strategies to develop self-efficacy for learners in clinical settings [17]. The interest of learner was another factor that influenced clinical education in the context of this study. Findings showed that physiotherapy students did not enjoy placements in areas that are not of their interest. A study on medical students at the University of Western Australia reported that students' preferred placements were found to be the most useful clinical placement compared to other placements [18]. However, options cannot always be given to students because the physiotherapy program requires students to attend placements across several areas of physiotherapy practice to achieve various learning outcomes. On the other hand, placement providers and physiotherapy educators may consider students' interest where possible, for example, in elective placements.

In this study, workload of clinical educator was reported as one of the barriers for physiotherapy clinical education. This was consistent with previous research findings on medical and physiotherapy clinical education in the United Kingdom and Australia respectively [19, 20]. This is an important factor to be addres-

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sed by the institution and physiotherapy educators to enhance the quality of clinical training within the UAE. In this study, clinical educators used different strategies such as problem-solving, self-directed directed learning and reflective practice in clinical education. But students' reported inconsistencies between clinical educators and it affected their clinical education experience. Previous studies also reported lack of consistency in the use of pedagogical principles for clinical teaching [21, 22]. Therefore, there is a need to innovate teaching strategies to fit the needs of learners particularly in physiotherapy clinical education. Clinical educators have reported lack of knowledge of physiotherapy curriculum that developed the foundational knowledge and skills of students. This is another factor that impacted physiotherapy clinical education in the UAE. Knowledge of models and principles underlying the design of curricula is listed as a core competency for nurse educators [23] and this can be applicable for physiotherapy clinical education.

Lack of physiotherapy faculty involvement in clinical education was a concern for clinical educators. They reported increased burden and time constraints which did not help them in clinical education. Academic-clinical partnership is of paramount importance and sharing of expertise helps to minimize theory-practice gaps [24]. However, in this context faculty was not connected to clinical education, particularly in evaluation of students' performance in clinical placement courses. This brings up a question on the reliability of evaluating students' performance in clinical education. Therefore, physiotherapy educators and the institutions must develop a plan to overcome the barrier for faculty involvement in clinical education. The health authority and higher education institution need to collaborate to address this issue and enable physiotherapy faculty to be actively involved in clinical education in the UAE. Clinical education model and placement expectations were the other factors that influenced clinical education in this context. The blocked model of placement with just four weeks duration did not help students. Moreover, the curriculum was designed in a way that clinical education was not integrated with academic courses. As a result, there was a potential theory-practice gap for students when they entered clinical placements at the latter end of the program. The duration and structure of clinical placement was reported as important factors that determined the belongingness of nursing students in clinical education [25]. Clinical educators and students recommended longer duration placements that runs parallel to theory courses. There was also a gap in establishing clear expectations between clinical educators, students, and academics. Lack of supervision for students and exceedingly high expectations provided to clinical educators were also considered as factors that negatively affected clinical education in the context of this study. Early exposure to clinical education and incorporating supervision strategies are some of the ways to overcome these barriers [21, 26]. Research findings indicate that clinical educators determine the quality of learning experience for students in clinical education. Clinical educator skills in providing a constructive feedback positively influenced students' learning in clinical settings [27, 28]. Peer learning was another factor which positively influenced clinical education. Clinical educators observed students supporting each other in overcoming their challenges. Previous research findings showed peer-assisted learning reduced students' anxiety, enhanced safe feeling and collaborative working, and reduced clinical educator burden [29].

Research evidence indicate that respecting students, supporting their learning needs and good communication are some of the essential qualities of a clinical educator [30, 31]. Clinical educators have used several strategies to promote students' learning. It is recommended that they make thinking visible to students by scaffolding ideas [32, 33]. Several studies have found reflective practice as a useful measure to manage anxieties, build confidence, and promote life-long learning [8, 34, 35]. Case study presentations and small group discussions are some of the ways to promote reflection in clinical education [36].

Limitations of the study include small sample size particularly student participation in the qualitative study. Hence, it is difficult to make assumptions on findings. The researchers tried to limit the bias through open communication. But still the power dynamics could have been a factor that limited student participation and could have influenced the openness of students' responses. All students were female and therefore, perceptions and feelings reported did not include the views of male students. Though the study was limited to only one of the three institutions offering physiotherapy education within the UAE, findings are useful to understand the factors affecting clinical education in this context.

Conclusions

This research identified several factors affecting physiotherapy clinical education in the UAE. These factors include students' interest, learning style, ability to cope with challenges, and culture. Clinical educator attributes include workload, teaching strategies, and curricular knowledge. Faculty involvement, clinical education model, placement expectations, and peer learning were the other academic factors impacting clinical education within the context. Mixed methods study was useful to explore clinical educator and student views about clinical education through their lived experience. Findings of this study contribute to existing literature on this topic and brings new evidence to physiotherapy clinical education within the region.

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