



Original Article



Perception of Undergraduate Physiotherapy Students Regarding Clinical Instructors' Behaviour During Clinical Training; A Descriptive Cross-Sectional Study

Abeera Ajmal¹, Moater Iftikhar², Iqra Almas¹, Sahreen Anwar³ and Wajida Perveen^{4,5*}¹Department of Physical Therapy, University of Sargodha, Sargodha, Pakistan²Department of Physical Therapy, The University of Faisalabad, Faisalabad, Pakistan³University Institute of Physical Therapy, University of Lahore, Lahore, Pakistan⁴Department of Physical Therapy, Sialkot College of Physical Therapy, Sialkot, Pakistan⁵Department of Physical Therapy, CMH Lahore Medical College & Institute of Dentistry (NUMS), Lahore, Pakistan

ARTICLE INFO

Keywords:

Undergraduate Physiotherapy Students, Clinical Instructors, Interaction, Clinical Instructor Behaviour Instrument

How to Cite:

Ajmal, A., Iftikhar, M., Almas, I., Anwar, S., & Perveen, W. (2024). Perception of Undergraduate Physiotherapy Students Regarding Clinical Instructors' Behaviour During Clinical Training; A Descriptive Cross-Sectional Study : Undergraduate Physiotherapy Students Regarding Clinical Instructors' Behaviour. *Pakistan Journal of Health Sciences*, 5(11). <https://doi.org/10.54393/pjhs.v5i11.2068>

*Corresponding Author:

Wajida Perveen

Department of Physical Therapy, CMH Lahore Medical College & Institute of Dentistry (NUMS), Lahore, Pakistan

wajida_perveen@cmhlahore.edu.pkReceived Date: 17th August, 2024Acceptance Date: 17th November, 2024Published Date: 30th November, 2024

ABSTRACT

Professional therapists must be prepared through clinical training, which forms the foundation of physiotherapy education. The effectiveness of the interactions between students and clinical instructors can help students learn more in the clinical setting. **Objective:** To find out the undergraduate physiotherapy students' perceptions regarding the clinical instructors' behaviours during clinical training. **Methods:** A descriptive cross-sectional study was conducted on 260 undergraduates of Doctor of Physical Therapy from different institutes of Faisalabad and Sialkot after ethical approval from September 2021 to March 2022. Students in 3rd year or 5th semester and above were included. A clinical instructor behaviour instrument was utilized to get the responses and SPSS version 21.0 to extract the results. Mean and standard deviations were computed for individual subsets of the instrument to find the perception. **Results:** Mean age \pm standard deviation was 22.79 \pm 15.75 years ranging from 21 to 25 years. Among the participants, 226 (86.92%) were female and 34 (13.07%) were male. A total score of all five categories of the clinical instructor behaviour instrument was found 116.17 out of a maximum possible score of 150. **Conclusions:** It was concluded that the perception of students regarding the clinical instructors' behaviours during clinical training was found positive.

INTRODUCTION

Clinical training, which forms the foundation of physiotherapy education, is essential for a qualified physical therapist. The effectiveness of the student-clinical teacher connection might help or hurt the student's ability to learn in the clinical setting. Perception is how a person interprets or makes assumptions about a specific situation, as well as how they think about that specific issue. The way something is viewed, comprehended, or interpreted [1]. The American Physical Therapy Association (APTA) and the American Council of Academic

Physical Therapy (ACAPT) are actively concentrating on defining best practices in clinical education [2]. Clinical instructors (CI) in physical therapy are held to professional standards, although the path to becoming a qualified CI has not been well studied in the literature [3]. Furthermore, there is no accepted definition in the literature regarding competency as a CI in the field of physical therapy [3]. Many studies indicated that clinical education is the most important component but still, it is a more challenging area of education for both students and clinical instructors [4].



Clinical educators concentrated on the steps in their teaching responsibilities rather than learning support strategies [5]. Clinical physiotherapy students rated the clinical education attributes of their lecturers and supervisors high [6]. Physical therapy students get the chance to apply their classroom knowledge and abilities to patient care experiences in a clinical facility through the clinical training of an entry-level physical therapy (PT) education program. The student applies knowledge and skills under the direction of a professional physical therapist serving as the CI. Students enrolled in the clinical education program must integrate their academic knowledge, professional development, and physical therapy skills to effectively manage patients and clients in difficult situations. CIs have the chance to affect how students are educated by modelling and instructing professional behaviours and abilities that students can learn from and reproduce. Physical therapist (PT) students have the chance to participate in clinical education as part of a professional (entry-level) education programme [5]. When students were assigned to well-run facilities for their clinical rotations, their satisfaction levels increased [7]. About one-third of the teaching is clinical training, the patient and student-centred learning environments are highly valued [8, 9]. The learning process is accelerated by clinical instructors' methods of instruction [10]. In 2018 Clint Newstead et al., studied the confidence, involvement, and training requirements of physical therapists in Australian clinical education (CE). Physiotherapists with different professional backgrounds participated in CE. Even though many participants had taken part in CE-related CPDs, many said that additional training was still needed. Future clinical educator training should be customised for the amount of experience of participants and concentrate on the CE components in which they lack confidence [11]. Students reported being happier with the clinical learning as a result of those instructors' clinical teaching characteristics, according to a 2017 study by Ehsan et al., on undergraduate physical therapy students' evaluations of those instructors' clinical teaching traits [12]. A uniform national curriculum for a five-year Doctor of Physical Therapy (DPT) degree programme was developed and implemented by the Higher Education Commission of Pakistan in 2011, which has been revised periodically. To meet national and international needs and standards a fair proportion of teaching time is dedicated to clinical training in more than 200 bedded hospitals has been made mandatory. The degree programme is offered by public and private degree-awarding institutions and affiliates. National regulatory body being in its infancy is not monitoring the requirements for DPT teaching institutions at present. Clinical training is an aspect that needs regular assessments of whether it is fulfilling the targeted outcomes or not. It is imperative to find out how students feel about the way clinical instructors behave when training DPT undergraduates in clinical settings. This study aims to find out the undergraduate

physiotherapy students' perceptions regarding the clinical instructors' behaviours during clinical training.

METHODS

This multicentre descriptive cross-sectional study was administered among 260 physical therapy undergraduate students of different institutes from two cities of Punjab from September 2021 to March 2022, after ethical approval by the institutional ethics review board of Sialkot College of Physical Therapy wide reference no. IRB-SCPT-DPT-146-2021. The sample size was calculated using G power software, with the formula: $n = [Z(1-\alpha/2)]^2 \cdot P(1-p) / (d)^2$. Where $Z(1-\alpha/2) = 1.96$ at 95% confidence interval, $P = \text{positive perception} = 0.70$ [13], $d = 0.056$ margin of error and $n = 258$ participants, so 260 participants were included. A convenient sampling technique was used to meet the sample. DPT Undergraduates enrolled in different universities both public and private and affiliated colleges in 3rd year or 5th semester and above, undergoing honorary internships and those carrying out supervised clinical practice as part of their curriculum were included. Students in 1st and 2nd year DPT were excluded. Data were collected using self-structured proforma for demographic and academic information and Clinical Instructor Behaviour Instrument (CIBI), (Cronbach alpha=0.92) after written informed consent from eligible students electronically [14, 15]. CIBI measures behaviours under five subsections including instructional, interpersonal, evaluative, professional and personal behaviours. Each subsection contains six items. The response was recorded on a Likert scale of 1-5, 1 being the least and 5 being the most important. The total score of the instrument ranges from 30-150, the higher the score, the more positive is the behaviour of the instructors [16]. The data were analysed using the statistical software SPSS version 21.0. The descriptive statistical analysis in the form of Mean and Standard deviation was performed.

RESULTS

Of the participants, 34 (13.07%) were male and 226 (86.92%) were females. With a range of 21 to 25 years, the Mean Age \pm SD was 22.79 \pm 15.75 years (Table 1).

Table 1: Demographic and Academic Information of the Participants

Variables	Results
Mean Age \pm SD (Years)	22.79 \pm 15.75
Min-Max (Years)	21-25
Gender	
Male	34 (13.07%)
Female	226 (86.92%)
Years of Study	
3 rd	80 (30.76%)

4 th	144 (55.38%)
5 th	36 (13.84%)
Institution	
Public	46 (17.69%)
Colleges Affiliated to Public	94 (36.15%)
Private	120 (46.15%)
Cities of Study	
Faisalabad	172 (66.15%)
Sialkot	88 (33.85%)
Supervised Clinical Practice	
Institutional Clinical Training Facility	30 (11.53%)
Public Hospital	90 (34.61%)
Private Hospitals And Clinics	58 (22.30%)
Special Education Rehab Facility	32 (12.30%)
Sports Centres	6 (2.3%)
Others	14 (5.38%)
None	30 (11.53%)

Results indicated that the mean of Explains the Procedure 4.11 ± 0.86 , Demonstrates Clinical Skill for Students 4.15 ± 0.74 , explains the Basis for Actions and Decisions 3.93 ± 0.83 , Provides Practice Opportunities for Students 3.97 ± 0.86 , Stimulates students problem-solving and critical thinking 3.77 ± 0.88 , Answers student questions clearly and precisely 3.92 ± 0.89 (Table 2).

Table 2: Summary of Instructional Behavior

Behavioural Description / Instructional	Mean \pm S.D
Explains Procedures Clearly	4.11 ± 0.86
Demonstrates Clinical Skills for Students	4.15 ± 0.74
Explains the Basis for Actions and Decisions	3.93 ± 0.83
Provides Practice Opportunities for Students	3.97 ± 0.86
Stimulates Student Problem Solving and Critical Thinking	3.77 ± 0.88
Answers Student Questions Clearly and Precisely	3.92 ± 0.89
Total Mean Score of All Items of Subset	3.97 ± 0.60

Score of Interpersonal Behavior showed that maintains an atmosphere that allows the expression of opinions 3.84 ± 0.85 , Encourages students to feel free to ask questions or to ask for help 4.03 ± 0.86 , Is available and accessible to students when needed 3.73 ± 0.99 , Exhibits a genuine interest in the student 3.76 ± 0.97 , Demonstrates confidence in and respect for the student 3.84 ± 0.96 , Provides support and encouragement for the student 3.81 ± 0.91 and total mean score of all items of subset 3.83 ± 0.60 (Table 3).

Table 3: Summary of Interpersonal Behavior

Behavioural Description / Interpersonal	Mean \pm S.D
Maintains an atmosphere that allows the expression of opinions	3.84 ± 0.85
Encourages students to feel free to ask questions or to ask for help	4.03 ± 0.86
Is available and accessible to students when needed	3.73 ± 0.99
Exhibits a genuine interest in the student	3.76 ± 0.97
Demonstrates confidence in and respect for the student	3.84 ± 0.96
Provides support and encouragement for the student	3.81 ± 0.91

The total mean score of all items of the subset	3.83 ± 0.60
---	-----------------

Analysis of evaluation showed that corrects students tactfully without belittling them 3.73 ± 0.93 , Provides useful and constructive feedback 3.75 ± 0.936 , demonstrates objectivity and fairness in the evaluation of the student 3.91 ± 1.055 , Observes and assesses student performance of the student 3.83 ± 0.97 , Provides specific suggestions for student improvement 3.80 ± 0.887 , Defines clearly the expectations of students 3.72 ± 0.91 and total mean score of all the items of subset was 3.79 ± 0.72 (Table 4).

Table 4: Summary of Evaluative Behavior

Behavioural Description / Evaluative	Mean \pm S.D
Corrects students tactfully without belittling them	3.73 ± 0.93
Provides useful and constructive feedback	3.75 ± 0.936
Demonstrates objectivity and fairness in the evaluation of the student	3.91 ± 1.055
Observes and assesses student performance of the student	3.83 ± 0.97
Provides specific suggestions for student improvement	3.80 ± 0.887
Provides support and encouragement for the student	3.72 ± 0.91
The total mean score of all items of the subset	3.79 ± 0.72

The summary of each item of professional behaviour is summarized (Table 5).

Table 5: Summary of Professional Behavior

Behavioural Description / Professional	Mean \pm S.D
Facilitates students' awareness of their professional responsibility	3.78 ± 0.98
Demonstrates interest in patients and their care	3.96 ± 0.95
Demonstrates clinical knowledge, competence, and judgment	3.99 ± 0.858
Relates underlying theory to physical therapy clinical practice	3.97 ± 0.88
Accepts responsibility for own actions	3.96 ± 0.94
Acts as a professional role model	3.97 ± 0.846
The total mean score of all items of the subset	3.93 ± 0.70

The summary of each item of personal behaviours is summarized (Table 6).

Table 6: Summary of Personal Behavior

Behavioural Description / Personal	Mean \pm S.D
Demonstrates honesty when working with students and patients	3.84 ± 0.849
Displays a sense of humor	3.79 ± 1.027
Demonstrates flexibility when working with students	3.85 ± 0.936
Demonstrates self-control and patience	3.84 ± 1.032
Demonstrates enthusiasm for teaching and clinical training	3.83 ± 1.015
Is friendly and outgoing when working with students	3.79 ± 0.987
The total mean score of all items of the subset	3.82 ± 0.71

The total score of CIBI along with the total of each subset, categorical means, and standard deviation of all five subsets of different behaviours. The categorical means of the behaviours showed us that all the categories have a mean value of less than 4 out of 5 which shows that most of the students' perception lies in the scoring of "important"

as mentioned in the questionnaire. CIBI has an overall total score of 116.17 out of 150 which equals 77.45% depicting a positive perception of behaviour (Table 7).

Table 7: Statistical Values of the Total Score of Five Categories of CIBI (n=260)

Categories of CIBI	Total Score Out of 30 Each	Mean \pm SD
Instructional	22.94	3.97 \pm 0.60
Interpersonal	23.63	3.83 \pm 0.60
Evaluative	22.74	3.79 \pm 0.72
Professional	23.01	3.93 \pm 0.70
Personal	23.85	3.82 \pm 0.71
Overall Total Score CIBI	116.17	-

DISCUSSION

The purpose of this study was to evaluate how clinical instructors behaved and how physiotherapy students perceived the qualities of a successful clinical instructor that aided in the learning process. The majority of studies on clinical instructors' efficacy have contrasted faculty and student opinions of these professors. Ismail *et al.*, discovered a direct correlation between nursing students' perceptions of clinical instructor behaviour and their actual usage. The findings of the current study confirmed the results of the previous study and showed a positive association. Aziz *et al.*, performed a study in Karachi in 2018 to learn how physical therapy students felt about the clinical training programme. The participants' responses were good and demonstrated their interest in the study. When participants were questioned about creating a positive learning environment that is approachable, non-threatening, and enthusiastic 70% of them agreed. About 40% of people were hesitant to pursue autonomous learning. Participants of the current study also desired to be trained under the supervision of experienced clinical trainers. Odole *et al.*, in 2017 conducted a study in Southwest Nigeria, aiming to gather feedback on the merits and disadvantages of the clinical education models currently in use there. 53 (71%) of the 74 physiotherapy educators who participated in this cross-sectional population-based survey—45 men and 29 women—had postgraduate degrees. Of the participants, twenty-two (29.7%) reported having received formal training in clinical education before working as clinical trainers. In this qualitative survey, seven themes were identified including the potential to connect theory to practice, growing self-assurance, greater collaboration between academics and clinicians, and improved clinicians. Our study differs in the methodology being a quantitative analysis and involving students only while they targeted the clinical trainers also. While there are advantages, providing practical instruction to physiotherapy students in southwest Nigeria is thought to have numerous advantages. The Nigeria University Commission must develop and execute policies that consider the purported drawbacks. When the students grow into professionals, this will result in a rise in the enhancement of their clinical skills. Safo *et al.*, studied the

ratings of physiotherapy students on clinical education attributes of lecturers and clinical supervisors on 81 clinical physiotherapy students using the McGill clinical teachers' evaluation (CTE) tool. They compare the means of students' level of study and ratings regarding the clinical education attributes of clinical supervisors and lecturers. The clinical education attributes of lecturers and supervisors were highly rated. Rating on clinical education attributes of supervisors ($p=0.111$) and lecturers ($p=0.124$) did not differ significantly between the different levels of study. We differ in the study population and in evaluating the class-wise perception feedback of the participants on a different outcome measurement tool. J Quartey *et al.*, studied perceptions of undergraduate allied health students about attributes of clinical trainers and clinical learning environment in Ghana. They utilized the clinical environment learning inventory and McGill clinical teacher evaluation tool on 169 allied health students. They found positive perceptions of AHS students about the environment and the teachers. The difference of our study is that we only focused on DPT undergraduates using CIBI for data collection although the sample size was comparable in both studies. Fox *et al.*, in their scoping review, reported that health education programs seek to incorporate more inter-professional activities into their respective programs, so it is important to review methods and measures that would best fit their program. Naido *et al.*, during the development of a tool to evaluate a physiotherapy clinical education programme in South Africa, identified the items that could be included. They used focused group discussion for qualitative data gathering. They observed that clinical physiotherapy education is complex and its diversity can be seen in the emerging themes. Current study differs from them as we used a quantitative approach and a validated available tool for data collection. Assessment and analysis of effective clinical attributes was the key element of this study. More focus and improvements are needed highlighting the patient and organization-related factors in the clinical education of physiotherapy students. The results of this study indicate that clinical educators may need to reframe teaching methodologies, especially regarding the behaviour towards the students. More research work is required on this subject with a larger sample size focus group discussions and qualitative analysis at the institutional level in Pakistan.

CONCLUSIONS

It was concluded that clinical practice has a crucial role in undergraduate physiotherapy education assessment and analysis of effective clinical attributes was the key element of this study. So, assessment of clinical instructors' behaviours and physical therapy students' perception towards these characteristics are important in improving physical therapy education to facilitate learning and ultimately the delivery of healthcare services. There is a positive perception of the students about clinical instructors' behaviours.

Authors Contribution

Conceptualization: MI, SA, WP

Methodology: MI, IA, SA

Formal analysis: AA, IA, SA

Writing review and editing: MI, SA, WP

All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

All the authors declare no conflict of interest.

Source of Funding

The author received no financial support for the research, authorship and/or publication of this article.

REFERENCES

- [1] Carmel S, Kupczynski L, Groff S, Bannon Jr W. Professional Experience Related to Self-Assessed Teaching Effectiveness Among Physical Therapist Clinical Instructors. *Journal of Physical Therapy Education*. 2023 Jun; 37(2): 108-15. doi: 10.1097/JTE.000000000000276.
- [2] Dickson T, Eckert J, Pabian P, Greco J. Challenges and Opportunities for Physical Therapist Education Research: Results from an American Council of Academic Physical Therapy Needs Assessment Survey. *Journal of Physical Therapy Education*. 2024 Mar; 38(1): 80-9. doi: 10.1097/JTE.0000000000000297.
- [3] Coleman-Ferreira K, Tovin M, Rone-Adams S, Rindflesch A. Achieving Clinical Instructor Competence: A Phenomenological Study of Clinical Instructors' Perspectives. *Journal of Physical Therapy Education*. 2019 Sep; 33(3) :224-35. doi: 10.1097/JTE.0000000000000106.
- [4] Iqbal H and Butt W. Attributes of an Effective Clinical Teacher in Undergraduate Medical Education: Students' Perspective: Attributes of an Effective Clinical. *Journal of Aziz Fatimah Medical and Dental College*. 2019 Apr; 1(1): 14-7. doi: 10.55279/jafmdc.v1i1.26.
- [5] Gibson SJ, Porter J, Anderson A, Bryce A, Dart J, Kellow N et al. Clinical Educators' Skills and Qualities in Allied Health: A Systematic Review. 2019; 53(5): 432-42. doi: 10.1111/medu.13782.
- [6] Safo-Kantanka NK, Quartey J, Kwakye SK. Physiotherapy Students' Rating on Lecturers' and Supervisors' Clinical Education Attributes. *Hong Kong Physiotherapy Journal*. 2024 Dec; 44(02): 79-90. doi: 10.1142/S1013702524500045.
- [7] Meyer IS, Louw A, Ernstzen D. Physiotherapy Students' Perceptions of the Dual Role of the Clinical Educator as Mentor and Assessor: Influence on the Teaching-Learning Relationship. *South African Journal of Physiotherapy*. 2017 Feb; 73(1): 1-8. doi: 10.4102/sajp.v73i1.349.
- [8] Myers K, Bilyeu C, Covington K, Sharp A. Clinical Teaching Competencies in Physical Therapist Education: A Modified Delphi study. *Physical Therapy*. 2022 Jul; 102(7): pzac063. doi: 10.1093/ptj/pzac063.
- [9] Jensen GM, Nordstrom T, Mostrom E, Hack LM, Gwyer J. National Study of Excellence and Innovation in Physical Therapist Education: Part 1-Design, Method, and Results. *Physical Therapy*. 2017 Sep; 97(9): 857-74. doi: 10.1093/ptj/pzx061.
- [10] Knight AW. How Clinical Instructor Behaviour Affects Student Clinical Engagement from A Motivational Perspective. *Journal of Nuclear Medicine Technology*. 2018 Jun; 46(2): 99-106. doi: 10.2967/jnmt.118.209320.
- [11] Newstead C, Johnston CL, Nisbet G, McAllister L. Physiotherapy Clinical Education in Australia: An Exploration of Clinical Educator Characteristics, Confidence and Training Requirements. *Australian Health Review*. 2018 Sep; 43(6): 696-705. doi: 10.1071/AH18094.
- [12] Ehsan S, Butt MS, Umar B. Perception of Undergraduate Physical Therapy Students Regarding the Clinical Teaching Attributes of Their Clinical Instructors. *Biomed Research*. 2017 Jun; 28(3): 1091-4.
- [13] Aziz K, Asif M, Arif A. Perception of Physical Therapy Students Regarding the Effectiveness of Clinical Teaching in Physical Therapy Education at Karachi. *Biometrics and Biostatistics International Journal*. 2018; 7(3): 212-6. doi: 10.15406/bbij.2018.07.00211.
- [14] Mogan J and Warbinek E. Teaching Behaviours of Clinical Instructors: An Audit Instrument. *Journal of Advanced Nursing*. 1994 Jul; 20(1): 160-6. doi: 10.1046/j.1365-2648.1994.20010160.x.
- [15] Lauber CA, Toth PE, Leary PA, Martin RD, Killian CB. Program Directors' and Clinical Instructors' Perceptions of Important Clinical-Instructor Behavior Categories in the Delivery of Athletic Training Clinical Instruction. *Journal of Athletic Training*. 2003 Oct; 38(4): 336.
- [16] Morren KK, Gordon SP, Sawyer BA. The Relationship Between Clinical Instructor Characteristics and Student Perceptions of Clinical Instructor Effectiveness. *Journal of Physical Therapy Education*. 2008 Dec; 22(3): 52-63. doi: 10.1097/00001416-200810000-00007.
- [17] Ismail LM, Aboushady RM, Eswi A. Clinical instructor's Behaviour: Nursing Student's Perception Toward Effective Clinical Instructor's Characteristics. *Journal of Nursing Education and Practice*. 2016 Feb; 6(2): 96. doi: 10.5430/jnep.v6n2p96.
- [18] Odole AC, Gbiri CA, Oladoyinbo P, Akinpelu AO. Perception of Physiotherapy Educators in Southwest

- Nigeria on Clinical Education of Undergraduate Physiotherapy Students. *African Journal of Biomedical Research*. 2017; 20(2): 157-64.
- [19] Quartey J, Acheampong K, Kwakye SK, Dankwah J. Perceptions of Undergraduate Allied Health Students of the Clinical Learning Environment and Clinical Educators' Attributes at the University of Ghana. *African Journal of Health Professions Education*. 2022; 14(4): 182-5. doi: 10.7196/AJHPE.2022.v14i4.1218.
- [20] Fox L, Onders R, Hermansen-Kobulnicky CJ, Nguyen TN, Myran L, Linn B *et al.* Teaching Inter-professional Teamwork Skills to Health Professional Students: A Scoping Review. *Journal of Inter-Professional Care*. 2018 Mar; 32(2): 127-35. doi:10.1080/13561820.2017.1399868.
- [21] Naidoo V, Stewart AV, Maleka ME. The Development of Items for A Physiotherapy Clinical Programme Evaluation Tool. *South African Journal of Physiotherapy*. 2023; 79(1): 1-5. doi: 10.4102/sajp.v79i1.1908.