

Knowledge, Perception, and Belief of Physical Therapy Students in Clinical Practice Guidelines

Ali Afzal¹, Mahnoor Aleem², Fahad Tanveer³, Habib Ur Rehman⁴, Muhammad Sarfraz⁵, Iqra Waseem⁶

¹ DPT, University Institute of Physical Therapy, University of Lahore, Lahore, Pakistan

² PT, DPT, MS (Neuro), Student, University Institute of Physical Therapy, University of Lahore, Lahore, Pakistan

³ PhD (Physical Therapy), Head of Department (Rehabilitation Sciences), Green International University, Lahore, Pakistan

⁴ DPT, Physiotherapist, Masood Hospital, Lahore, Pakistan

⁵ PT, Associate Professor, Department of Physiotherapy, Dow Institute of Physical Medicine and Rehabilitation, Dow University of Health Sciences, Karachi, Pakistan

⁶ PT, DPT, MS (MSK), Assistant Professor, University Institute of Physical Therapy, University of Lahore, Lahore, Pakistan

*Corresponding author: Iqra Waseem, iqra.waseem91@gmail.com

"Cite this Article" Received: 20 February 2026; Accepted: 06 March 2026; Published: 15 March 2026

Author Contributions: AA, MA, FT, HUR, MS, and IW contributed to study concept, design, data collection, analysis, manuscript drafting, critical review, and approval of the final manuscript. **Ethical Approval:** University of Lahore, Lahore, Pakistan. **Informed Consent:** Written informed consent was obtained from all participants; **Conflict of Interest:** The authors declare no conflict of interest. **Funding:** No external funding; **Data Availability:** Available from the corresponding author on reasonable request; **Acknowledgments:** N/A.

ABSTRACT

Background: Clinical practice guidelines are essential tools for supporting evidence-based decision-making, improving care consistency, and reducing unwarranted variation in physical therapy practice. Students' knowledge, perceptions, and beliefs regarding these guidelines may influence their readiness to apply evidence-based recommendations during clinical training and future professional practice. **Objective:** This study aimed to assess the knowledge, perceptions, and beliefs of physical therapy students regarding clinical practice guidelines. **Methods:** A cross-sectional observational study was conducted among 88 physical therapy students at the University of Lahore Teaching Hospital, Lahore, Pakistan, using a structured questionnaire. Data were analyzed using IBM SPSS Statistics version 26. Categorical variables were summarized as frequencies and percentages. **Results:** Most participants were aged 21–25 years (93.2%), with a nearly balanced gender distribution. Overall, 81.8% had heard of clinical practice guidelines, but only 28.4% correctly identified them as evidence-based recommendations for clinical practice. Extensive training in accessing and interpreting guidelines was reported by 36.4%, while 42.0% reported only brief training. Most students agreed or strongly agreed that guidelines are essential for high-quality physical therapy care (67.1%), reported confidence in applying them (75.0%), and believed they reduce variability in clinical practice (72.7%). **Conclusion:** Physical therapy students showed high awareness and generally positive beliefs regarding clinical practice guidelines, but accurate conceptual understanding and depth of training were limited. Structured guideline-focused education is needed to improve evidence-based clinical readiness. **Keywords:** Belief; Clinical Practice Guidelines; Evidence-Based Practice; Knowledge; Perception; Physical Therapy Students

INTRODUCTION

Clinical practice guidelines are systematically developed recommendations intended to support evidence-informed decision-making, reduce unwarranted variation in care, and improve the consistency and quality of patient management. In physical therapy, where clinical reasoning requires integration of patient presentation, functional goals, clinician expertise, and current evidence, the ability to understand and apply clinical practice guidelines is increasingly important for safe and effective practice. Contemporary physical therapy education is therefore expected not only to develop technical competence but also to prepare students to locate, interpret, and implement research-based recommendations within real clinical contexts. This is particularly relevant because students entering clinical placements are required to translate theoretical knowledge into patient-centered decisions, often under supervision and within settings where practice habits may vary (1).

The role of evidence-based practice in physical therapy has expanded substantially over recent years, with clinical practice guidelines now available for several major rehabilitation conditions, including neurological, musculoskeletal, orthopedic, vestibular, and geriatric populations. These guidelines provide structured recommendations for assessment, intervention selection, outcome monitoring, and referral decisions, thereby helping clinicians align treatment with the best available evidence while considering patient-specific needs (2). Examples from Parkinson disease management, knee osteoarthritis, hip fracture rehabilitation, ankle sprain management, and vestibular rehabilitation illustrate the growing reliance on guideline-based care across physical therapy specialties (3–7). For students, early exposure to such guidelines can strengthen clinical reasoning, improve awareness of standardized care pathways, and encourage professional accountability in decision-making.

Knowledge of clinical practice guidelines involves more than simply being aware that such documents exist. It includes understanding their purpose, recognizing their evidence base, identifying reliable sources from which guidelines can be accessed, and knowing how recommendations should be adapted to individual patients. Students who are unfamiliar with guideline development, grading of evidence, or the distinction between evidence-based recommendations and routine clinical advice may struggle to use guidelines appropriately. Similarly, perception and belief influence whether students consider clinical practice guidelines useful, practical, and relevant to real-world care. A student may know about guidelines but still perceive them as rigid, difficult to apply, or less useful in complex patient scenarios. Conversely, students with positive perceptions may view guidelines as decision-support tools that complement clinical judgment rather than replace it.

This distinction between knowledge, perception, and belief is important in physical therapy education because guideline use depends on cognitive understanding as well as professional attitude. Clinical practice guidelines can help reduce variation among clinicians, but their implementation may be limited when students do not receive sufficient training in how to access, interpret, and apply them. Undergraduate and clinical education should therefore emphasize practical engagement with guidelines through case-based learning, supervised clinical reasoning, and exposure to guideline-informed decision-making. In primary care and rehabilitation settings, where physical therapists may increasingly participate in screening, triage, and management planning, early familiarity with guideline-based practice is especially important (8).

Despite the increasing availability of clinical practice guidelines, limited local evidence is available regarding how physical therapy students understand, perceive, and value these resources during their training. This gap is important because students' educational exposure and beliefs during training may shape their future willingness to use evidence-based recommendations in clinical practice. Assessing students' knowledge, perception, and beliefs can help identify gaps in curriculum delivery, clinical mentorship, and student readiness for evidence-based practice. Therefore, this study aimed to assess the knowledge, perception, and beliefs of physical therapy students regarding clinical practice guidelines in a teaching hospital setting. The study specifically sought to determine students' awareness of clinical practice guidelines, their perceived importance in patient care, their confidence in applying them, and their beliefs regarding the role of guidelines in reducing variability in physical therapy practice.

MATERIALS AND METHODS

This cross-sectional observational study was conducted among physical therapy students at the University of Lahore Teaching Hospital, Lahore, Pakistan, over a six-month study period. The design was selected because the objective was to assess students' existing knowledge, perceptions, and beliefs regarding clinical practice guidelines at a single point in time without assigning any intervention or follow-up exposure. The study population comprised students enrolled in physical therapy training who were available during the data collection period and consented to participate. Students from other health-

related disciplines and individuals who were not part of the physical therapy student population were excluded to maintain alignment between the research question and the target population.

Participants were selected using a non-probability convenience sampling technique. Eligible students were approached in the institutional setting and invited to complete the study questionnaire after receiving an explanation of the study purpose. Participation was voluntary, and responses were collected using a structured questionnaire designed to assess demographic characteristics and key domains related to clinical practice guidelines. The final analytical sample included 88 completed questionnaires from physical therapy students. The demographic variables included age, gender, and year of study, while the main study variables included prior awareness of clinical practice guidelines, understanding of their definition, usual sources for accessing guidelines, perceived importance of following guidelines in patient care, previous training in accessing and interpreting guidelines, confidence in applying guidelines in clinical practice, belief regarding the role of guidelines in reducing variability among physical therapists, and general perception of their usefulness in patient-care decision-making.

The questionnaire was self-structured and organized to capture the three conceptual domains of the study: knowledge, perception, and belief regarding clinical practice guidelines. Knowledge-related items assessed whether participants had heard of clinical practice guidelines, how they defined them, where they usually accessed them, and how they rated their own knowledge. Perception-related items assessed the perceived importance and helpfulness of clinical practice guidelines in clinical decision-making. Belief-related items assessed confidence in applying guidelines and whether participants believed that guidelines reduce variability in physical therapy practice. Responses were recorded as categorical variables using predefined response options. To improve consistency in data collection, the same questionnaire format was used for all participants, and completed forms were reviewed for completeness before data entry.

Data were entered and analyzed using IBM SPSS Statistics version 26. Categorical variables were summarized using frequencies and percentages. Age, gender, year of study, awareness of clinical practice guidelines, perceived importance, training exposure, confidence, and belief-related responses were reported descriptively. Associations between selected categorical variables were assessed using the chi-square test when assumptions were met. Where expected cell counts were small, the interpretation of chi-square results was considered cautiously, and category collapsing or exact testing was considered more appropriate for confirmatory analysis. A p-value of less than 0.05 was considered statistically significant. Missing or incomplete responses were not included in item-level analysis. The analysis was conducted using the available completed responses, and denominators were kept consistent with the number of valid responses for each variable.

Potential sources of bias included convenience sampling, self-reported responses, single-center recruitment, and variation in students' prior academic or clinical exposure to evidence-based practice. These were addressed analytically by reporting the sampling method transparently, limiting interpretation to the study population, and avoiding causal claims. Because the study was descriptive and observational, findings were interpreted as reflecting students' reported awareness, perceptions, and beliefs rather than objective competence in guideline implementation. Data integrity was maintained through structured data entry, consistency checking of frequencies and percentages, and review of the dataset before statistical analysis. The study was conducted in accordance with standard ethical principles for human participant research, including voluntary participation, confidentiality of responses, and use of collected data for research purposes only.

RESULTS

A total of 88 physical therapy students participated in the study. The demographic and academic characteristics of the participants are presented in Table 1. Most participants were aged 21–25 years, and

the gender distribution was nearly balanced. Students from the final year and third year represented the largest academic groups.

Table 1. Demographic and Academic Characteristics of Participants

Variable	Category	n	%
Age	Under 20 years	5	5.7
Age	21–25 years	82	93.2
Age	26–30 years	1	1.1
Gender	Female	43	48.9
Gender	Male	45	51.1
Year of study	First year	11	12.5
Year of study	Second year	18	20.5
Year of study	Third year	29	33.0
Year of study	Final year	30	34.1

The study sample was predominantly composed of students aged 21–25 years, accounting for 82 of 88 participants. Male students represented 45 participants and female students represented 43 participants, showing a near-equal gender distribution. In relation to academic level, 30 students were in the final year and 29 were in the third year, indicating that most respondents were in the later stages of physical therapy training.

Knowledge-related responses regarding clinical practice guidelines are shown in Table 2. Most participants had previously heard of clinical practice guidelines; however, accurate conceptual understanding was less consistent. Only 25 participants identified clinical practice guidelines as evidence-based recommendations for clinical practice, while larger proportions selected descriptions related to therapeutic exercises or administrative healthcare procedures. The most common reported sources of clinical practice guidelines were textbooks or course materials and clinical instructors or supervisors.

Table 2. Knowledge-Related Responses Regarding Clinical Practice Guidelines

Variable	Response	n	%
Heard of clinical practice guidelines	No	16	18.2
	Yes	72	81.8
Definition of clinical practice guidelines	Evidence-based recommendations for clinical practice	25	28.4
	A list of therapeutic exercises for specific conditions	28	31.8
	Guidelines for administrative procedures in healthcare	28	31.8
	Not sure	7	8.0
Usual source of clinical practice guidelines	Online databases	17	19.3
	Professional associations	15	17.0
	Textbooks or course materials	23	26.1
	Clinical instructors or supervisors	23	26.1
	Not sure	10	11.4
Self-rated knowledge of clinical practice guidelines	Very knowledgeable	44	50.0
	Somewhat knowledgeable	16	18.2
	Not very knowledgeable	22	25.0
	Not knowledgeable at all	6	6.8
Training in accessing and interpreting clinical practice guidelines	Yes, extensively	32	36.4
	Yes, but only briefly	37	42.0
	No	9	10.2
	Not sure	10	11.4

Although 72 participants reported prior awareness of clinical practice guidelines, only 25 selected the evidence-based definition. In contrast, 28 participants described them as therapeutic exercise lists and another 28 described them as administrative healthcare procedure guidelines. This pattern indicates a gap between general awareness and accurate conceptual understanding. Training exposure was also variable: 32 participants reported extensive training, while 37 reported only brief training in accessing and interpreting clinical practice guidelines.

Perception-related responses are presented in Table 3. Overall, participants showed mixed perceptions regarding the importance of clinical practice guidelines in patient care. While 29 students considered following clinical practice guidelines extremely important and 21 considered them somewhat important, 22 reported that they were not important and 16 were unsure. Agreement with the statement that clinical practice guidelines are essential for high-quality physical therapy care was more favorable, with 32 students strongly agreeing and 27 agreeing.

Table 3. Perceptions Regarding Clinical Practice Guidelines

Variable	Response	n	%
Importance of following clinical practice guidelines in patient care	Extremely important	29	33.0
	Somewhat important	21	23.9
	Not important	22	25.0
	Not sure	16	18.2
Clinical practice guidelines are essential for high-quality physical therapy care	Strongly agree	32	36.4
	Agree	27	30.7
	Neutral	11	12.5
	Disagree	13	14.8
	Strongly disagree	5	5.7
Role of clinical practice guidelines in patient-care decision-making	Very helpful	37	42.0
	Somewhat helpful	20	22.7
	Not helpful	17	19.3
	Not sure	14	15.9

Perceptions toward clinical practice guidelines were generally favorable but not uniform. A total of 50 participants considered guideline adherence either extremely or somewhat important in patient care, while 38 either considered it not important or were unsure. Similarly, 59 participants agreed or strongly agreed that clinical practice guidelines are essential for high-quality physical therapy care. Regarding decision-making, 37 participants considered guidelines very helpful and 20 considered them somewhat helpful, whereas 31 participants either did not consider them helpful or were unsure.

Belief and confidence-related responses are summarized in Table 4. Most participants reported confidence in applying clinical practice guidelines and believed that guidelines help reduce variability in clinical practice among physical therapists.

Table 4. Beliefs and Confidence Regarding Clinical Practice Guidelines

Variable	Response	n	%
Confidence in applying clinical practice guidelines in clinical practice	Very confident	46	52.3
	Confident	20	22.7
	Somewhat confident	11	12.5
	Not confident	6	6.8
	Not sure	5	5.7
Belief that clinical practice guidelines reduce variability in clinical practice	Yes	64	72.7
	No	14	15.9
	Not sure	10	11.4

Confidence in applying clinical practice guidelines was high, with 46 participants reporting that they were very confident and 20 reporting that they were confident. However, 11 participants were only somewhat confident, 6 were not confident, and 5 were unsure. Most participants believed that clinical practice guidelines reduce variability in clinical practice, with 64 selecting “Yes,” compared with 14 selecting “No” and 10 selecting “Not sure.”

The descriptive readiness profile is further summarized in Figure 1. The figure shows that while awareness of clinical practice guidelines was high at 81.8%, accurate identification of their evidence-based definition was considerably lower at 28.4%. Extensive training was reported by 36.4% of participants, while 50.0% rated themselves as very knowledgeable and 52.3% reported being very confident. Favorable orientation toward clinical practice guidelines was most evident for confidence in application and belief in reduced practice variability, but conceptual understanding and depth of training remained comparatively weaker.

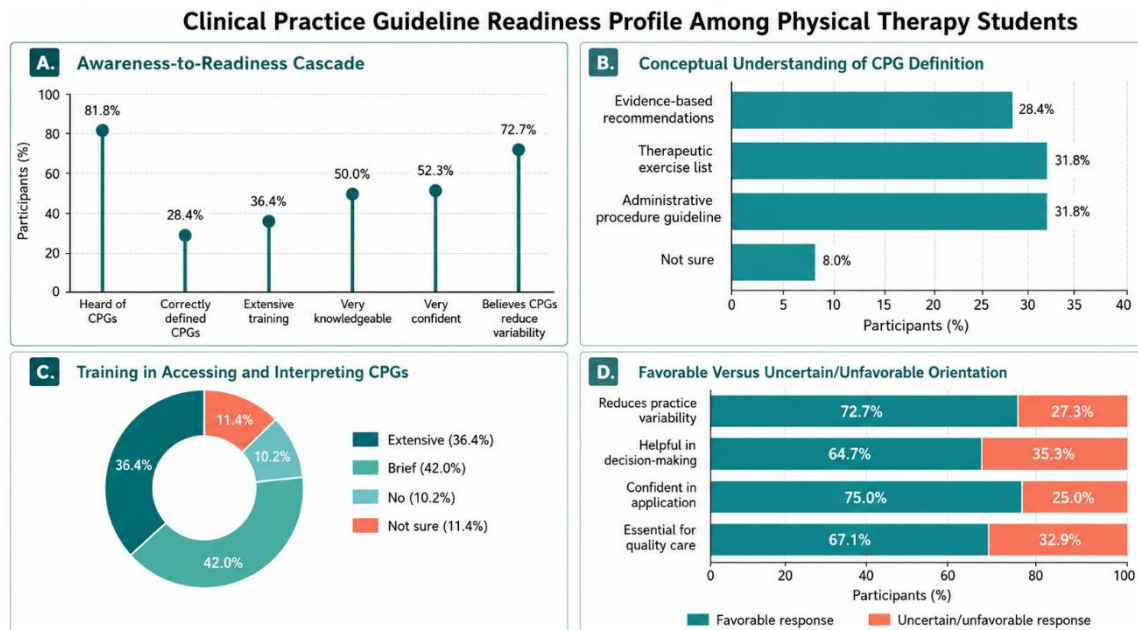


Figure 1. Clinical Practice Guideline Readiness Profile Among Physical Therapy Students

The panelled readiness profile shows a substantial gap between basic awareness and accurate conceptual understanding of clinical practice guidelines. Although 81.8% of participants had heard of clinical practice guidelines, only 28.4% correctly identified them as evidence-based recommendations for clinical practice, while 31.8% described them as therapeutic exercise lists and another 31.8% as administrative procedure guidelines. Training exposure was also uneven, with 36.4% reporting extensive training and 42.0% reporting only brief training in accessing and interpreting guidelines. Despite this conceptual gap, favorable attitudes were common: 75.0% reported confidence in applying clinical practice guidelines, 72.7% believed they reduce variability in clinical practice, 67.1% agreed or strongly agreed that they are essential for high-quality physical therapy care, and 64.7% considered them helpful in patient-care decision-making. These findings suggest that while students generally value clinical practice guidelines, their readiness for evidence-based implementation is limited by incomplete conceptual understanding and variable formal training.

DISCUSSION

This cross-sectional study assessed the knowledge, perception, and beliefs of physical therapy students regarding clinical practice guidelines in a teaching hospital setting. The findings show that most participants had heard of clinical practice guidelines, yet accurate conceptual understanding was comparatively limited. Although 81.8% of students reported prior awareness of clinical practice guidelines, only 28.4% correctly identified them as evidence-based recommendations for clinical practice. In contrast, 31.8% described them as therapeutic exercise lists and another 31.8% described them as administrative healthcare procedure guidelines. This distinction is important because general awareness alone does not ensure evidence-based application. Clinical practice guidelines are intended to synthesize current evidence into structured recommendations that support clinical reasoning, standardize care, and reduce unwarranted practice variation; therefore, misunderstanding their purpose may limit students' ability to use them appropriately during clinical training and future professional practice (9).

The gap between awareness and accurate understanding suggests that exposure to clinical practice guidelines may be superficial or inconsistently integrated into students' educational and clinical learning experiences. In this study, only 36.4% of participants reported extensive training in accessing and interpreting clinical practice guidelines, while 42.0% reported only brief training. This pattern indicates that many students may encounter guidelines during academic or clinical instruction without

receiving sufficient practical training in how to locate, interpret, appraise, and apply recommendations to patient-specific scenarios. Similar concerns have been raised in evidence-based physical therapy education, where students may express favorable attitudes toward evidence-informed care but still require structured guidance in literature retrieval, interpretation of recommendations, and translation of evidence into clinical decisions (10). In the present study, textbooks or course materials and clinical instructors or supervisors were the most frequently reported sources of guidelines, each reported by 26.1% of participants, while online databases and professional associations were less commonly reported. This distribution suggests that students may depend more heavily on institutional and supervisor-mediated sources than on independent access to professional guideline repositories or research databases.

The perception findings demonstrated a generally favorable but not uniform orientation toward clinical practice guidelines. Approximately one-third of participants considered guideline adherence extremely important, while 23.9% considered it somewhat important. However, 25.0% reported that following guidelines was not important, and 18.2% were unsure. This mixed perception is clinically meaningful because students who do not recognize the importance of guideline-based care may be less likely to incorporate evidence-based recommendations into decision-making. At the same time, 67.1% of participants agreed or strongly agreed that clinical practice guidelines are essential for high-quality physical therapy care, suggesting that many students value the concept of guideline-based practice even if their understanding of guideline purpose and implementation remains incomplete. This finding supports the need for teaching strategies that move beyond theoretical awareness and emphasize applied guideline use through case-based learning, clinical scenarios, and supervised decision-making.

Confidence in applying clinical practice guidelines was relatively high in the present study, with 52.3% of participants reporting that they were very confident and 22.7% reporting that they were confident. However, this confidence must be interpreted cautiously because only 28.4% correctly identified the evidence-based definition of clinical practice guidelines. The mismatch between high self-reported confidence and limited accurate conceptual understanding may reflect overestimation of competence, variable interpretation of the term “clinical practice guideline,” or limited exposure to formal guideline appraisal. This is particularly important in physical therapy education because confidence without adequate methodological understanding may lead students to apply recommendations mechanically, rely on incomplete sources, or confuse guideline-based care with routine exercise prescriptions. Training should therefore focus not only on improving confidence but also on ensuring competence in identifying guideline quality, understanding recommendation strength, and adapting recommendations to individual patients while maintaining evidence-based standards.

Most participants believed that clinical practice guidelines reduce variability in clinical practice, with 72.7% selecting “Yes” for this item. This is a positive finding because reducing unwarranted variability is one of the central purposes of guideline-based care. However, the presence of 15.9% who did not believe guidelines reduce variability and 11.4% who were unsure indicates that a notable minority may not fully appreciate how guidelines contribute to standardization and quality improvement. In clinical education, this belief may be influenced by how students observe guideline use during placements. If clinical instructors model evidence-based decision-making and explain how recommendations are adapted to individual patients, students may be more likely to view guidelines as practical decision-support tools rather than rigid protocols. Conversely, inconsistent clinical modeling may reinforce the perception that guidelines are optional, theoretical, or disconnected from real-world practice.

The results should be interpreted within the limitations of the study design. The study used a single-center cross-sectional design and non-probability convenience sampling, which limits generalizability beyond the included student population. The findings are based on self-reported responses and therefore may be affected by recall bias, social desirability bias, and overestimation of knowledge or confidence. The questionnaire was self-structured, and the manuscript does not report formal validation, pilot

testing, or reliability estimates, which limits certainty regarding measurement accuracy. In addition, the original manuscript reported a chi-square result but did not specify the variables included in the cross-tabulation, and the reported expected cell count warning suggests that chi-square assumptions may not have been fully satisfied. Therefore, the present interpretation is primarily descriptive and does not infer statistically confirmed associations among academic year, training exposure, awareness, or confidence.

Despite these limitations, the study highlights an important educational gap. Physical therapy students appear generally aware of clinical practice guidelines and many hold favorable beliefs about their role in improving care quality and reducing practice variability. However, the findings also show incomplete conceptual understanding, variable training exposure, and uncertainty among a meaningful subgroup of students regarding the importance and helpfulness of guidelines. These findings support the need for structured curricular integration of clinical practice guidelines, including teaching on guideline sources, evidence grading, recommendation interpretation, clinical adaptation, and reflective use during supervised placements. Future studies should use validated tools, multicenter sampling, and analytic designs that can examine associations between academic level, clinical exposure, formal training, and guideline-related competence.

CONCLUSION

This study found that physical therapy students demonstrated high general awareness of clinical practice guidelines and generally favorable beliefs regarding their value in clinical decision-making and reduction of practice variability. However, accurate conceptual understanding was limited, as fewer than one-third of participants correctly identified clinical practice guidelines as evidence-based recommendations for clinical practice. Training exposure was also variable, with many students reporting only brief instruction in accessing and interpreting guidelines. These findings indicate that awareness alone is insufficient and that physical therapy education should include structured, practical, and clinically integrated training on guideline retrieval, interpretation, appraisal, and application. Strengthening guideline-based education may improve students' readiness for evidence-informed clinical practice and support more consistent, high-quality patient care.

REFERENCES

1. Mahmood T, Salam A, Waseem I, Khalid A, Maqsood U. The attitude of physical therapy students towards their profession and education in Punjab. *Journal of Islamabad Medical & Dental College*. 2022;11(3):182-187.
2. Osborne JA, Botkin R, Colón-Semenza C, DeAngelis TR, Gallardo OG, Kosakowski H, et al. Physical therapist management of Parkinson disease: a clinical practice guideline from the American Physical Therapy Association. *Phys Ther*. 2022;102(4):pzab302.
3. Dantas LO, Salvini TF, McAlindon TE. Knee osteoarthritis: key treatments and implications for physical therapy. *Braz J Phys Ther*. 2021;25(2):135-146.
4. McDonough CM, Harris-Hayes M, Kristensen MT, Overgaard JA, Herring TB, Kenny AM, et al. Physical therapy management of older adults with hip fracture: clinical practice guidelines linked to the International Classification of Functioning, Disability and Health from the Academy of Orthopaedic Physical Therapy and the Academy of Geriatric Physical Therapy of the American Physical Therapy Association. *J Orthop Sports Phys Ther*. 2021;51(2):CPG1-CPG81.
5. Martin RL, Davenport TE, Fraser JJ, Sawdon-Bea J, Carcia CR, Carroll LA, et al. Ankle stability and movement coordination impairments: lateral ankle ligament sprains revision 2021: clinical practice guidelines linked to the International Classification of Functioning, Disability and Health from the Academy of Orthopaedic Physical Therapy of the American Physical Therapy Association. *J Orthop Sports Phys Ther*. 2021;51(4):CPG1-CPG80.

6. Hall CD, Herdman SJ, Whitney SL, Anson ER, Carender WJ, Hoppes CW, et al. Vestibular rehabilitation for peripheral vestibular hypofunction: an updated clinical practice guideline from the Academy of Neurologic Physical Therapy of the American Physical Therapy Association. *J Neurol Phys Ther.* 2022;46(2):118-177.
7. Leech KA, Roemmich RT, Gordon J, Reisman DS, Cherry-Allen KM. Updates in motor learning: implications for physical therapist practice and education. *Phys Ther.* 2022;102(1):pzab250.
8. Boissonnault WG, Vanwyke WR. Primary care for the physical therapist: examination and triage. St Louis: Elsevier Health Sciences; 2025.
9. Kubicki A. Physical therapists have a main role in environmental health. *European Rehabilitation Journal.* 2023;3(1):1-2.
10. Suso-Martí L, La Touche R, Herranz-Gómez A, Angulo-Díaz-Parreño S, Paris-Aleman A, Cuenca-Martínez F. Effectiveness of telerehabilitation in physical therapist practice: an umbrella and mapping review with meta-meta-analysis. *Phys Ther.* 2021;101(5):pzab075.
11. Reis FJ, Nijs J, Parker R, Sharma S, Wideman TH. Culture and musculoskeletal pain: strategies, challenges, and future directions to develop culturally sensitive physical therapy care. *Braz J Phys Ther.* 2022;26(5):100442.
12. Miller MJ, Pak SS, Keller DR, Barnes DE. Evaluation of pragmatic telehealth physical therapy implementation during the COVID-19 pandemic. *Phys Ther.* 2021;101(1):pzaa193.
13. Grundstein MJ, Fisher C, Titmuss M, Cioppa-Mosca J. The role of virtual physical therapy in a post-pandemic world: pearls, pitfalls, challenges, and adaptations. *Phys Ther.* 2021;101(9):pzab145.
14. Ellis TD, Colón-Semenza C, DeAngelis TR, Thomas CA, Saint Hilaire MH, Earhart GM, et al. Evidence for early and regular physical therapy and exercise in Parkinson's disease. *Semin Neurol.* 2021;41:321-330.
15. Olson KA. Manual physical therapy of the spine. St Louis: Elsevier Health Sciences; 2021.
16. Malliaras P, Merolli M, Williams C, Caneiro J, Haines T, Barton C. "It's not hands-on therapy, so it's very limited": telehealth use and views among allied health clinicians during the coronavirus pandemic. *Musculoskelet Sci Pract.* 2021;52:102340.