

## Original Article

## Awareness of Physiotherapy Among Higher Secondary School Students In Mianwali District

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### Abstract

**Objective:** To find out the awareness of physiotherapy among higher secondary school students in Mianwali District.

**Study design:** It is a Descriptive Cross-Sectional study design.

**Place and duration of study:** The study was conducted in some higher secondary school students of Mianwali District. within a period of 4 months.

**Material and Methods:** We had 323 participants; both male and female students (aged 15 to 20 years) from Higher Secondary School students of Mianwali District were included. We gathered data over 4 months. Data was collected using a self-structured questionnaire. After taking informed consent, we collected the data. Data was then analyzed using SPSS version 21, frequencies and percentage were calculated for individual variables.

**Results:** This study showed that 238\323 participants had poor awareness, 68\323 had average, and 17\323 had good awareness about physiotherapy among Higher Secondary School students of Mianwali District due to lack of knowledge about physiotherapy.

**Conclusion:** Our study concluded that the students of higher secondary school Mianwali district had poor awareness about physical therapy.

**Keywords:** awareness, physiotherapy, physiotherapists, scope, promotion, higher secondary schools, Mianwali District

### 1. Introduction

Physical therapy is a healthcare profession focusing on boosting, restoring, and sustaining physical function and mobility in individuals. It includes various therapeutic exercises, manual techniques, and modalities, all aimed at tackling a wide range of conditions, injuries, and disabilities. (Richardson 2015). Physical therapy is dedicated to recognizing and maximizing the quality of life and potential movement in various contexts, including prevention, intervention, and healing. Its objectives encompass mental, emotional, and societal well-being, emphasizing the importance of promoting physical and psychological welfare (Doshi, Jiandani et al. 2017).

The scope of physical therapy is in urgent need of promotion to raise community awareness about the

significance of this vital profession within the healthcare sector. Physiotherapy's potential in tertiary health settings for rehabilitation and care of individuals with disabilities is well-recognized, but its role in health promotion and disease prevention continues to grow (Ahmad and Shah 2021). Physiotherapy is now recognized as a health profession with scientifically-based protocols that are an integral part of patient treatment. Its application extends to various settings, including healthcare institutions, private practices, schools, sports, and workplaces, involving interactions between physiotherapists, clients, other healthcare professionals, families, caregivers, and communities (Abichandani and Parkar 2017).

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Physical therapists are dynamic professionals who enhance the quality of life for individuals through targeted exercises, direct care, and patient education. They work with people of all ages, from newborns to seniors, addressing various conditions such as injuries, movement dysfunctions, and physical impairments that require treatment. By assessing each individual's needs, physical therapists give treatment plans to improve their mobility, alleviate pain, restore functionality, and prevent future injuries. Their impact on people's lives is profound, assisting them in achieving their fitness goals, regaining or maintaining independence, and living active lives (Pachpor, Athavale, et al. 2021).

PTs play a remarkable role in public hospitals, providing comprehensive care for patients with a wide range of medical and surgical conditions, including arthritis, burns, pediatric disorders, pulmonary problems, neurological issues, cardiac conditions, trauma, and sports injuries (Bolarinde, Olagunju, et al. 2018). Physical therapists play an essential role in the healthcare team, facilitating faster patient recovery, shorter hospital stays, and improved quality of life through evidence-based quality healthcare services. As health-related issues become more complex, and the healthcare system faces challenges in managing them, the demand for specialists, including physiotherapists, is increasing (Dash 2019).

As the demand for skilled physiotherapists continues to grow, more university students are inclined to pursue physiotherapy as a career path. Understanding the field's significance and the scope of psychoanalysis motivates aspiring professionals to choose this rewarding vocation (Rathi and Chandra 2020). The skills and expertise of physiotherapists are acquired through formal education and work experience, making it a long-term and carefully considered career choice (Roochand-Martin & Noel, 2014).

Physical therapy is a flexible healthcare field that offers numerous advantages to individuals dealing with diverse medical conditions and injuries i.e, Musculoskeletal conditions like low back pain (Foster, Anema, et al. 2018), osteoarthritis (Pryymachenko,

Wilson, et al. 2021), Neurological disorders like stroke (Sánchez and Weinstein 2021), Pediatric Conditions conditions like cerebral palsy (Novak, Morgan, et al. 2017), sports-related injuries, including ACL tears (Barber-Westin and Noyes 2020). Physiotherapy provides effective pain relief through various proven methods. Techniques such as TENS, IFT, and ultrasound have demonstrated benefits for pain management (Levinger, Murley et al., 2010), improving body alignment and posture (Callaghan, De Carvalho, et al. 2015), injury prevention (Verhagen, Van Der Beek, et al. 2004), Improved Women's Health addressing various postpartum-related discomforts, aiding in a smoother recovery for new mothers (Pastore and Katzman 2012). PTs collaborate closely with patients to create customized exercise programs and action plans targeting pain associated with rib and chest pain, muscle and joint pain, back pain, headaches, neck pain, immobility, and tightness (Tseng, Wang, et al., 2006).

By introducing physiotherapy to higher secondary school students, they become aware of the importance of rehabilitation and physical therapy in healthcare. This understanding can contribute to building a healthier society that values preventive and rehabilitative healthcare approaches. (Kaplan, 2018).

The sample for the study was taken with the approval of ethical committee of some Govt and Private schools of Mianwali District including Govt High school Kamar Mashani, Govt High Secondary School Kamar Mashani, Superior College Mianwali, Punjab College Mianwali, and Superior College Kamar Mashani. About 350 science students are selected for study. The main objective is to find out the awareness of physiotherapy among Higher Secondary School students in Mianwali District.

## 2. Materials & Methods

A descriptive cross sectional survey was done within a period of 4 months among the higher secondary school students of Mianwali District. Sample size was 323 was determined by using raosoft calculator. Non probability

convenience sampling was used. Our study included student age between 15-20 years. Only science students were included. Students of both genders who were willing to complete the observation period were included. Students of Government and Private Higher Secondary Schools were included. Students of Primary schools were excluded. Those students who were not giving responses of the questionnaire were excluded. We used self-designed questionnaire (Jothi Prasanna, K. at al 2021). We seek permission from CASHT research committee. Consent form was signed from the research participants. After taking consent from the student's, self-designed questionnaire was filled from students. We used SPSS 21 version for analysis. For qualitative variables mean, frequency and percentages were taken. Frequency charts and plots were used for showing the results of variables. Frequency charts and graphs were formed of all qualitative variables.

**3. Results**

In this study, the data was collected from higher secondary schools of Mianwali district. The sample size was 323. The students falling in our inclusion criteria were the students of the science group with the age limit of 15-20. Both genders were included in the study from private and government sector schools.

The results demonstrate that 153 participants fall in the category of 15-17 age group and 170 participants fall in the category of 18-20 age group.

The results below shows that out of 323 study participants, 174 were male and 149 were female. Table 1 shows the frequencies of gender included in the study.

**Table 1:** Frequency of Gender distribution of study participants.

Student Gender	f	%	Valid Percent	Cumulative Percent
Male	174	53.9	53.9	53.9
Female	149	46.1	46.1	100.0
Total	323	100.0	100.0	

In the current study, the results show that 159 students knew that physical therapy is the use of surgical procedures to treat physical ailments, 125 students knew that physical therapy is the use of medications to treat physical ailments and 39 students knew that physical therapy is the use of exercise and movement to treat physical ailments.

**Table 2:** Frequency Distribution question about what is physical therapy?

What is physical therapy?	Frequency	Percent	Valid Percent	Cumulative Percent
The use of surgical procedures to treat physical ailments	159	49.2	49.2	49.2
The use of medications to treat physical ailments	125	38.7	38.7	87.9
The use exercise and movement to treat physical ailments	39	12.1	12.1	100.0
Total	323	100.0	100.0	

The current study results show that 6 participants thought that DPT course duration is 2 years, about 212 students said that the duration of DPT is 3 years, 59 students said that the course duration is about 4 years and only 46 students said that DPT course duration is 5 years. On x- axis the graph shows about the years of the course duration of DPT in Pakistan while y-axis shows the frequency.

Table below shows total score categories. The current study results show that about 238 poor lies in the poor category, about 68 students in the average category, and 17 students lie in the good category.

**Table 3:** Frequency Distribution about Total score category

Total score category	Frequency	Percent	Valid Percent	Cumulative Percent
1-20=poor	238	73.7	73.7	73.7
21-40=average	68	21.1	21.1	94.7
41-60=good	17	5.3	5.3	100.0
Total	323	100.0	100.0	

The objective of our study was to assess the awareness of physiotherapy among higher secondary school students in Mianwali District. The finding of this study reveals that mostly students are unaware about physical therapy. The finding reveals that out of 323, about 238(73.7%) lies in the poor category, about 68(21.1%) students in the average category, and 17(5.3%) students lie in the good category of awareness.

#### 4. Discussion

Our study is conducted on the awareness of physiotherapy among higher secondary school students in Mianwali district. The main objective of our study is to find out the awareness of physiotherapy among Higher Secondary School students in Mianwali District.

In a 2022 study led by Dr. Mohabbat Ali et al., the focus was on assessing the awareness of the scope of the physical therapy field among intermediate pass students. The findings indicated that half of the participants were well-informed about the various sub-specialties within physiotherapy. Moreover, 70% and 60% of the participants exhibited knowledge about treatment modalities and their applications in physiotherapy practice, respectively. The study's conclusion emphasized that high school students generally possess a commendable understanding of physiotherapy as a profession. However, it underscored the necessity to augment their knowledge through additional education on the subject. Group statistics applied to the collected data revealed that male participants displayed a higher level of awareness regarding the questions compared to their female counterparts (Ali, 2022). Our study's result was that

there was a lack of awareness of physiotherapy among higher secondary school students (Ali, 2022).

In 2021, Jothi Prasanna et al. conducted a survey was carried out to assess the awareness of physiotherapy among higher secondary school students in Kumbakonam, Thanjavur District. The study included approximately 200 students, and data was collected through a semi- dependent questionnaire. The findings of this survey revealed that awareness regarding all three aspects of physiotherapy was significantly low. It suggests that there might be a need to raise awareness among college students, apart from just the professionals, to promote the growth of this field (Jothi Prasanna, 2021). This previous study's results show similar results of our study that the students were not aware of physiotherapy and there is a need to promote the physiotherapy field among students.

In 2021, Radha Pachpor<sup>1</sup>, Neeraj Athavale, et al. conducted a study exploring the Perception and Awareness of Physiotherapy among Junior College Students. Physiotherapy, a growing field in healthcare with numerous advantages, is experiencing growing demand. Notably, even junior college students have the opportunity to pursue a Bachelor of Physiotherapy degree. It is crucial for these students to be aware with this profession, especially in relation to their individual interests. They did a study using Google Forms, asking 280 junior college students who studied biology. Most of them (97.1%) knew about physiotherapy as a healthcare profession. More than half (53.9%) believed they needed a doctor's referral to see a physiotherapist. They mostly learned about it from their relatives and doctors. About 73.6% said they would consider it as a profession. The study's findings indicate that although junior college students exhibit a high level of awareness regarding physiotherapy, their perceptions of the field vary significantly (Pachpor, 2021). This past study's results are opposed to our current study because our study results were that the higher secondary school students were not aware of physiotherapy.

This study finds out the awareness of physical therapy among higher secondary school students in Mianwali District. A self-structured questionnaire was used to collect the answers of the students which shows awareness. The total 323 participants lying between age

of 15-20 years studying in science group were included. The finding shows that students were poorly aware about physiotherapy i.e 238 participants were poorly aware. We also give awareness to them by introducing our field and adding some questions in the questionnaire with the purpose of providing awareness to the students. These questions shows that 100% students participated in our research by filling the questionnaire were aware about physical therapy.

### Conclusion:

The main objective of our study was to find out the awareness of physiotherapy among Higher Secondary School students in Mianwali District. The study's finding showed that higher secondary school students are poorly aware about physical therapy. Moreover, our study concluded that 73% students falls in poor category, 21% students had average awareness and 5% students had good awareness.

### Limitations:

The main limitation of our research was the small sample size, shortage of time for research conduction, biases in the survey responses, focusing only on one geographical area, and challenges in establishing a causal relationship between awareness and potential behavior change. Additionally, time and resource constraints might limit the depth of analysis and the ability to include a wide range of variables that could influence awareness levels.

### Recommendations:

Our recommendations for future researchers will be that they should expand the sample size to include a more diverse range of schools within Mianwali, ensuring representation of various socioeconomic backgrounds, educational systems, and geographic locations. This will enhance the generalizability of the findings. If possible, consider comparing the awareness levels among higher secondary school students in Mianwali with those in other nearby cities or regions. This can provide valuable insights into regional variations in awareness. To establish a causal relationship between awareness and potential behavior change, consider

conducting a longitudinal study that tracks students' awareness levels over time and correlate them with changes in behavior or attitudes toward physical therapy.

### Conflict of Interest:

The authors declare that there is no conflict of interest.

### References:

1. Abichandani, D., & Parkar, B. (2017). Comparison of upper limb proprioception in chronic mechanical neck pain patients with age-sex matched healthy normals. *International Journal of Science and Research*, 6(3), 1423-1428.
2. Ahmad, Z., & Shah, Z. (2021). Awareness of physical therapy among medical doctors in Swabi. *Rehman Journal of Health Sciences*, 3(1), 43-47.
3. Ali, M., Manzoor, M., Fatima, M., Iqbal, S. M. S., Maqbool, R., & Masood, M. A. (2022). Evaluation of Awareness of Scope of Physical Therapy Field amongst Intermediate Pass Students. *J Adv Educ Philos*, 6(7), 400-409.
4. Barber-Westin, S., & Noyes, F. R. (2020). One in 5 athletes sustain reinjury upon return to high-risk sports after ACL reconstruction: a systematic review in 1239 athletes younger than 20 years. *Sports Health*, 12(6), 587-597.
5. Bolarinde, S., Olagunju, T. J., & Olley, J. P. (2018). Knowledge and Perception of Female Health Care Professionals on the Importance of Physiotherapy in Ante Natal and Post Natal Care. *J Family Med Community Health*, 5(4), 1157.
6. Dash, S., Shakyawar, S. K., Sharma, M., & Kaushik, S. (2019). Big data in healthcare: management, analysis and future prospects. *Journal of big data*, 6(1), 1-25.
7. De Carvalho, D. E., & Callaghan, J. P. (2015). Spine posture and discomfort during prolonged simulated driving with self-selected lumbar support prominence. *Human factors*, 57(6), 976- 987.
8. Doshi, D., Jiandani, M., Gadgil, R., & Shetty, N. (2017). Physiotherapy awareness in medical and non medical population: A social media survey. *Int J Physiother Res*, 5(2), 1971-1975.
9. Dufour, S. P., Graham, S., Friesen, J., Rosenblat, M., Rous, C., & Richardson, J. (2015). Physiotherapists supporting self-management through health coaching: a mixed methods program evaluation. *Physiotherapy theory and practice*, 31(1), 29-38.
10. Foster, N. E., Anema, J. R., Cherkin, D., Chou, R., Cohen, S. P., Gross, D. P., ... & Woolf, A. (2018). Prevention and treatment of low back pain: evidence, challenges, and promising directions. *The Lancet*, 391(10137), 2368-2383.

11. Gandhi, T. K., Kaplan, G. S., Leape, L., Berwick, D. M., Edgman-Levitan, S., Edmondson, A., & Wachter, R. (2018). Transforming concepts in patient safety: a progress report. *BMJ Quality & Safety*, 27(12), 1019-1026.
12. Jothi Prasanna, K. (2021). Awareness of Physiotherapy among Higher Secondary Students-A Survey. *Indian Journal of Forensic Medicine & Toxicology*, 15(1).
13. Levinger, P., Murley, G. S., Barton, C. J., Cotchett, M. P., McSweeney, S. R., & Menz, H. B. (2010). A comparison of foot kinematics in people with normal-and flat-arched feet using the Oxford Foot Model. *Gait & posture*, 32(4), 519-523.
14. Novak, I., Morgan, C., Adde, L., Blackman, J., Boyd, R. N., Brunstrom-Hernandez, J., ... & Badawi, N. (2017). Early, accurate diagnosis and early intervention in cerebral palsy: advances in diagnosis and treatment. *JAMA pediatrics*, 171(9), 897-907.
15. Pachpor, R., Athavale, N., Dabadghav, R., Shyam, A., & Sancheti, P. (2021). Perception and Awareness of Physiotherapy in Junior College Students. *International Journal of Health Sciences and Research*, 11(7), 243-8.
16. Pastore, E. A., & Katzman, W. B. (2012). Recognizing myofascial pelvic pain in the female patient with chronic pelvic pain. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 41(5), 680-691.
17. Prymachenko, Y., Wilson, R., Sharma, S., Pathak, A., & Abbott, J. H. (2021). Are manual therapy or booster sessions worthwhile in addition to exercise therapy for knee osteoarthritis: Economic evaluation and 2-year follow-up of a randomized controlled trial. *Musculoskeletal Science and Practice*, 56, 102439.
18. Rathi, A. S., & Chandra, R. (2020). Awareness of physiotherapy as a career option among higher secondary students of Nagpur city: a cross-sectional study. *Int J Health Sci Res*, 10(10), 13-20.
19. Roopchand-Martin, S., & Noel, G. (2014). Secondary school students' knowledge of physical therapy: the trinidadian scenario. *The West Indian medical journal*, 63(2), 151.
20. Sanchez-Bezanilla, S., Hood, R. J., Collins-Praino, L. E., Turner, R. J., Walker, F. R., Nilsson, M., & Ong, L. K. (2021). More than motor impairment: A spatiotemporal analysis of cognitive impairment and associated neuropathological changes following cortical photothrombotic stroke. *Journal of Cerebral Blood Flow & Metabolism*, 41(9), 2439-2455.
21. Tseng, Y. L., Wang, W. T., Chen, W. Y., Hou, T. J., Chen, T. C., & Lieu, F. K. (2006). Predictors for the immediate responders to cervical manipulation in patients with neck pain. *Manual Therapy*, 11(4), 306-315.
22. Verhagen, E., Van Der Beek, A., Twisk, J., Bouter, L., Bahr, R., & Van Mechelen, W. (2004). The effect of a proprioceptive balance board training program for the prevention of ankle sprains: a prospective controlled trial. *The American journal of sports medicine*, 32(6), 1385- 1393.