

# Awareness of Physiotherapy as Career Option among Higher Secondary Students of Nagpur City: A Cross Sectional Study

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## ABSTRACT

Physiotherapy is an emerging field in healthcare with innumerable benefits and its demand continues to increase. The higher secondary students are eligible to pursue Bachelor of Physiotherapy programme. It is important to have awareness regarding the profession that is related to their field of study.

**Aim:** To find awareness of higher secondary students about physiotherapy as a career option and also to find common source of information about the profession.

**Materials and methods:** The cross sectional study was undertaken with the help of a Questionnaire which was distributed to 329 higher secondary students with biology as elective subject. Data was collected and statistically analyzed.

**Result:** 48% students said Physiotherapy is part of medical course, 65.6% students knew the role of physiotherapy in orthopedic conditions, 54% participants thought that physiotherapist cannot be the first contact practitioner, 47% participants said that they can prescribe medicine, 62% thought average income of physiotherapist per month is more than Rs20, 000 and 34% received information through professionals. 46% students wanted to pursue Physiotherapy as their career.

**Conclusion:** The study indicated that higher secondary students of Nagpur city are still not completely aware of the scope of physiotherapy profession. Professionals and mass media have been identified as the major source of information about the profession. Appropriate measures have to be taken to create a good attitude towards the profession through these influential sources.

**Keywords:** Physiotherapy, Awareness, Career option, Higher Secondary Students.

## INTRODUCTION

Physiotherapy is a well-recognized profession worldwide <sup>[1]</sup> which is growing its importance and expanding the scope of practice. <sup>[2]</sup>Physiotherapy has been described as a dynamic health care profession with established theoretical and widespread clinical application, which involves mainly physical approaches, in the preservation, development, and restoration of optimum physical function. <sup>[3]</sup>Often asked what is physical therapy and what does a physiotherapist do, it is difficult to restrict its definition in a few words since the

profession is holistic in approach. <sup>[4]</sup> World Confederation of Physical Therapy (WCPT) defines Physical Therapy as "A health care profession which deals with human function & movement and helps patient in maximizing physical potential. It helps patient in improvising his quality of life by use of physical approaches in promotion, prevention, treatment/intervention and rehabilitation <sup>[5]</sup>" Physiotherapy is certainly far more than fixing musculoskeletal sports injuries although that is perhaps the most common perception of the profession. <sup>[6]</sup> Physiotherapy management techniques can

be used in all specialties such as orthopedics, Neurology, Cardio-respiratory, Obstetrics & Gynecology and can be used to treat various conditions from paediatric age group to geriatric age group.<sup>[1]</sup> It is a specialized profession which has progressed from Bachelor to Master and PhD programs.

The advent of physiotherapy in India was in the year 1952, due to the outbreak of Poliomyelitis in Mumbai.<sup>[4]</sup> It's been more than 7 decades since the inception of physiotherapy in India but it is still in budding stage compared to other health care streams<sup>[7]</sup> and still lacks a streamlined referral system as compared to the Western world.<sup>[8]</sup> Due to lack of awareness, people usually resort to self-medication for instant pain relief and come to physiotherapist pretty late when orthopedics or other doctors refer them to physiotherapist<sup>[9]</sup> as the practice of physiotherapy as a first contact practitioner is not common in India.<sup>[10]</sup> Physiotherapy is such an integral part of health care without which complete recovery of an individual with any disorder is not possible, but instead of this profession growing, it is on a decline in India.<sup>[11]</sup> As the need of good physiotherapists is increasing, more and more students will pursue physiotherapy if they aware about the field and scope of physiotherapy.<sup>[11]</sup> Although a lot of literature concerning health-care professionals and general public's knowledge about the physiotherapy profession has been carried out,<sup>(2,4,10,15-17)</sup> very few studies are focused on high school students.<sup>(1,6,14)</sup> When planning one's future career, it is important to have information about various occupations and professions that are related to his/her field of study.<sup>[6]</sup> In a nutshell, the higher secondary students from science field are the future Physiotherapists of India as they are eligible to pursue health courses such as medicine, Physiotherapy & nursing.<sup>[1]</sup> How can physiotherapy profession be made known and utilized by the public if a pool of aspiring profession seekers is not aware of its existence?<sup>[12]</sup> The availability of factual information about a profession is an

influential factor in making career decisions.<sup>[1]</sup> However, many high school students still lack appropriate information and are therefore unaware of the vast career opportunities open to them,<sup>[13]</sup> so it is essential to expand their view on the profession. This study could provide an insight about the awareness of Physiotherapy profession as a career option and to find common source of information about the profession among the Higher Secondary students and help them in choosing their career pathway.

## **MATERIALS AND METHODS**

**Research approach-** Cross sectional survey

**Study population-** Higher secondary students with biology as elective subject

**Sample size-** 329

**Study setting** – Coaching classes in Nagpur, Maharashtra

### **MATERIAL-**

The survey was conducted using a questionnaire that was adapted from a similar study done by Rutika S Potdar, Atiya A Shaikh (2015). The questionnaire consists of Demographic data, five open ended questions and three close ended questions.

### **METHODOLOGY-**

The list of coaching classes in Nagpur was prepared and institutes were selected randomly from this list by simple random sampling method. Students were selected from each class by simple randomization.

**Inclusion criteria-** Higher secondary students with biology as elective subject, students voluntarily willing to participate.

**Exclusion criteria-** Unwilling students and Non science group students.

### **PROCEDURE-**

Objectives of the study were clearly explained to the students and verbal consent was taken. Questionnaire was distributed to

the students and Instructions regarding marking of questionnaire were explained to the students. The doubts were cleared and questionnaire was collected. Analysis of the data was done.

### STATISTICAL ANALYSIS:

Data was coded and analyzed in the statistical software STATA version 10.1 (2011).

DESCRIPTIVE STATISTICS: Descriptive statistics like frequency and percentages were used to summarize question wise responses of students. The responses about awareness were expressed as percentages along with 95% confidence intervals.

## RESULTS

**Table 1: Gender characteristics of participants.**

Gender	Frequency	Percentage
Male	143	43.4%
Female	186	56.6%
Total	329	

The table 1 shows the demographic characteristics of participants. Total 329 students which consist of 143(43.4%) male and 186(56.6%) female participated in the study.

**Table 2: Physiotherapy is a part of**

Options	No of students	Percentage
Nursing	3	0.9%
Paramedical	46	13.9%
Medical	159	48%
Allied health	121	36.7%

Table 2 shows that only 13.9% participants have said that physiotherapy is a paramedical course. It is evident that the awareness of the participants regarding this component is very unsatisfactory. 48% students thought physiotherapy is a part of medical and 36.7% participants cited it as Allied health course.0.9% students thought it is a part of nursing.

**Table 3: Physiotherapy treatment includes**

Options	No of students	Percentage
Massage	157	47.7
Exercises	215	65.3
Pain management	175	53.1
Hot or cold therapy	64	19.4
Machine treatment	61	18.5

Table 3 illustrates the awareness about different modes of physiotherapy treatment. Good awareness (65.3%) is noticed regarding that exercises are a part of physiotherapy treatment followed by pain management (53.1%). Many students (47.7%) believe that massage is included in the treatment. The awareness regarding hot or cold therapy (19.4%) is very unsatisfactory. Very few students (18.5%) believe that Physiotherapy includes machine treatment.

**Table 4: Physiotherapist can work in the following fields**

Options	No of students	Percentage
Pediatrics	74	22.4
Women's Health	112	34
Neurological conditions	93	28.2
Orthopedic problems	216	65.6
Cardiac / Respiratory problems	96	29.1

Table 4 illustrates the awareness regarding physiotherapy in various fields. The awareness about the role of physiotherapy in various specialties is not satisfactory. Most of the participants (65.6%) had awareness about the role of physiotherapy in orthopedic problems. The awareness of physiotherapy treatment in other specialties like Neurological conditions (28.2%), Women's health (34%), Cardiac and Respiratory problems (29.1%) and Pediatric conditions (22.4%) was very poor among the students.

**Table 5: Information about this course?**

Options	No of students	Percentage
Mass Media	96	29
Relatives	57	17.3
Professionals	112	34
Other	64	19

Table 5 shows the sources of information about physiotherapy course. Many students (34%) said they have received information about physiotherapy services and information regarding physiotherapy course through professionals followed by mass media (29%). Few students (17.3%) have obtained information from relatives and other sources (19%).

**Table 6: Gross earning of physiotherapist for month**

Options	No of students	Percentage
5K-10K	24	7.2
10K-15K	16	4.8
15K-20K	85	25
More than 20K	204	62

Table 6 illustrates 62% participants thought average income of physiotherapist is more than 20k per month while 25% participants said it is between 15k-20k. Very few 7.2% and 4.8% participants said that it is 5k-10k and 10k-15k respectively.

**Table 7: Do you think physiotherapists are allowed to prescribe medicine?**

Options	No of students	Percentage
Yes	155	47
No	173	52

Table 7 shows that almost half of the participants (47%) thought physiotherapists can prescribe medicines.

**Table 8: Do you think physiotherapist can be first contact practitioner?**

Options	No of students	Percentage
Yes	153	46
No	176	54

Table 8 illustrates that more than half (54%) participants said that Physiotherapists cannot be first contact practitioner while 46% thought that they can be the first contact practitioner.

**Table 9: Would you like to pursue physiotherapy this field as career option?**

Options	No of students	Percentage
Yes	152	46
No	177	54

Table 9 shows that 46% students would like to pursue physiotherapy as their career.

## DISCUSSION

This study helped to understand the awareness of various aspects of physiotherapy and its awareness as a career option among the higher secondary students of Nagpur City. It also helped to find the various sources of information regarding the profession. The main reason to carry out this survey among the students was that the higher secondary students with biology as elective subject are potential candidates to

pursue bachelor of physiotherapy course. Most of the students (48%) believed that physiotherapy is part of medical course. Very few students cited it as paramedical which clearly depicts that majority of the students were not aware about the physiotherapy profession and its scope. When we compare with similar studies done by Shimpachiro [13] in Japan among ishikawa high school students it is seen 58% of respondents are aware about Physiotherapy. In the study conducted in high school students in Sri Lanka [6] more than 63% of them are unaware about physiotherapy profession and its application in patient management. In a similar study conducted at Meerut (India), 41% of higher secondary students had an idea about Physiotherapy. [11] It is important to develop awareness of physiotherapy among the students from science background as these students will pursue physiotherapy course only if they are aware of its scope and practice.

Q2 in the survey was regarding the different modes used in physiotherapy treatment. Majority of the students (65.3%) believed that exercises are a part of physiotherapy treatment while many of them thought that it includes massage. It is evident from the results that there is a misconception regarding the modes of physiotherapy treatment. According to the results, only 18.5% participants had knowledge about the use of modalities in physiotherapy treatment. In contrast to these results, a very high awareness about electro modality (95%) is noticed in the similar study conducted in Sri Lanka. [6] In a survey by Harikrishnan R [1] only 9% respondents are aware of all components of physiotherapy. While in a study by Martin Ebenezer (Malaysia) 98% students did not have adequate knowledge of physiotherapy modalities [2] and in a similar study by Nilima S Bedekar (Pune) only 5% students knew that electrical modalities play a vital role in physiotherapy services. [14] The results of this study suggests that the Higher secondary students need to have appropriate

information regarding all the modes used in physiotherapy treatment as some there are misconceptions about the various methods of treatment. If they have appropriate knowledge regarding the various methods used in physiotherapy it can prevent the misbelieve in students as well as they can provide accurate information to the community.

This study provided information about awareness regarding the various conditions that can be treated by Physiotherapists. Many students (65.6%) were familiar with the role of physiotherapy in orthopedic conditions but its scope in other specialities like Cardio-pulmonary problems (29.1%), Neurological conditions (28.2%), Women's health (34%) and pediatric disorders (22.4%) was found to be very poor. The awareness about the field of practice of physiotherapy profession is conditions like cerebral Palsy, hemiplegia, multiple Sclerosis, ataxia, chronic obstructive pulmonary disease, pelvic floor disorders and many other conditions was very unsatisfactory. Similar findings are noticed in the study conducted by Riju [12] among high school students in Anand district, India. In a similar study by Harikrishnan R [1] most of the respondents (80%) are aware about use of physiotherapy in musculoskeletal conditions and only 17% are aware about its use in pediatrics. Also, similar observation is found in a study among high school students in Japan by Ogiwara and Nozoe. [13] In a study by Ebenezer [2] 4% students have adequate awareness of sub-specialties in physiotherapy. A high number of students have inadequate knowledge on the cases seen by physiotherapists (87.9%) and the conditions treated by physiotherapists (90.9%). Survey conducted by Pallavi Bargaje [14] shows only 2.5% and 0.5% students knew that physiotherapy is also useful in cardiorespiratory and pediatric conditions. In a study about Awareness of various aspects of physiotherapy among medical residents by Deepa Abichandani [10] it is found that even most medical residents

(97.22%) are aware about musculoskeletal physiotherapy and only 2% know about both pre and post-operative physiotherapy but comparing to study about physiotherapy awareness among clinical doctors in Nepal [16] 93% of clinical doctors refer their patient to physiotherapy post-operatively and 63% agree to refer them pre-operatively. Physiotherapy adds life to years by providing rehabilitation in so many conditions but still there is a lack of knowledge about the diverse scope in physiotherapy. Over years Physiotherapy profession has progressed from Bachelor to Master's Degree. So, there is need to educate the higher secondary students about the conditions managed by physiotherapists and provide them with accurate information about the various specialties in physiotherapy so that it will help them to make their career choice.

Based on the analysis of the results, it is evident that professionals play a major role in influencing student's knowledge on physiotherapy profession followed by mass media among the higher secondary students of Nagpur City. Mass media and career pamphlets were found to be main sources of information about Physiotherapy among high school students in Japan. [13] In a survey among high school students of Anand district the main source of information about physiotherapy services are doctors. [12] In a survey by Thusharika D [6] television, internet, and newspapers/magazine are the most cited source of information for physiotherapy. In a similar study conducted by Harikrishnan R, 44.44% students came to know about Physiotherapy from television. [1] Although the mass media can reach young people easily with messages [2], professionals can provide accurate information about physiotherapy profession and its scope to the higher secondary students. So, informative sessions by professionals to the higher secondary students among Nagpur can be very useful in providing information. In this survey, students were asked about the average income of physiotherapist per month and

according to the results many participants said that average income of physiotherapist per month is more than Rs20, 000. Few participants were not aware about the average income of physiotherapist. The earning of physiotherapists depends on the practice setting, hours of practice and the field of practice. Recently, many physiotherapist offer home visits or online treatment sessions to the patients who cannot visit them regularly .So, the earning of a physiotherapist depend on various factors and with developing awareness about good quality of life the need of physiotherapists is increasing. If there is false impression about the income of physiotherapists it may serve as a barrier among the aspiring students to not pursue physiotherapy course. This was the reason to evaluate this factor in the study and it is very important to provide information regarding this to the potential candidates to pursue physiotherapy.

Many of the students were not aware on whether physiotherapists can prescribe drugs to patients. Almost half of the participants (47%) thought that physiotherapists are allowed to prescribe medicine which shows that there are still misleading beliefs among the participants. Physiotherapists have knowledge regarding drugs, its mode of action and its side effects as they have all the subjects included in their curriculum. It is important for Physiotherapists to have this knowledge to deal patients with various conditions. They do not prescribe medicine and use other modes of treatment to help patient in pain management, rehabilitation and achieve complete functional independence. This misconception may be due to lack of knowledge on the job scope of physiotherapists. Hence, there is a need to clarify the role of physiotherapists in drug prescription. [2] More than half of the participants (54%) responded that physiotherapists cannot be first contact practitioner. This reveals that the students were not aware about the physiotherapy services and this may lead to

underutilization of the services provided by physiotherapy. This may also be due to the mindset of students that Physiotherapy can only be taken when a physician refers them to a physiotherapist. In India, patients are referred by medical practitioner with a referral letter for receiving physiotherapy services. [7] In a survey conducted in Seth G.S.M.C & K.E.M Hospital, India (2002) it is found that 18% population approached for physiotherapy treatment by direct contact, while 82% came through medical referral. [4] In a similar study by Pallavi Vitthal Bargaje (Pune) [14] 40% students did not know if physiotherapist can be directly visited/reference from doctor is required for physiotherapy. Physiotherapists work in various health care setting and the number of independent practitioners is increasing. There is a need to inculcate the knowledge about physiotherapy services among the students so that there is complete utilization of services provided by all specialities of physiotherapy.

From the data collected, it was found that 46% students would like to pursue physiotherapy as their career. In a similar study in Meerut 26% of higher secondary students wanted to pursue physiotherapy as their career. [11] Also, in a study by Pallavi Vitthal Bargaje [14] majority (74.5%) of students would consider physiotherapy as a career option.

A study done on Ishiwaka high school students investigated how senior high school student's knowledge of physiotherapy is acquired and their possible view of physiotherapy as a career. Science students were more aware than non science students. 85% respondents indicated their aspiration to have career, so acquisition of appropriate information on career during high school is important. [13] This implies that if appropriate awareness is created among the potential students to pursue the career a positive approach can be created among the students.

There is a dearth of physiotherapy professionals in India [14] and many students are willing to receive information about

physiotherapy profession. We need to provide accurate information regarding the scope of physiotherapy so that many aspiring high school students consider physiotherapy as their career option. The various sources that provide information regarding physiotherapy should also be accurate so that misconceptions about the profession can be prevented.

## CONCLUSION

This study identified that the students of Nagpur city need more information regarding physiotherapy, its uses in treating conditions other than orthopedic disorders, modes of physiotherapy treatment as many of them have a wrong perception about physiotherapy. As professionals were the most influential source of physiotherapy services, informative sessions regarding physiotherapy profession should be conducted for the students so that awareness can be created about physiotherapy services and as well as a prospective career pathway.

**Limitation:** The major limitation is sample size. The findings of this study cannot be generalized to higher secondary students of Nagpur city as all coaching classes and colleges could not be included. Findings can be attributed to a group of Higher Secondary students.

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