

# Preference of Internet Usage versus Textbook Usage for Diagnosis and Treatment Planning in Physiotherapy Students: A Cross Sectional Study

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## ABSTRACT

**Background and need of study:** This study aims to evaluate the frequency with which physiotherapy students experience; the need of digital information resources and academic textbooks to diagnose and treat patients. The widespread availability of internet-connected smart devices in the health care setting has the potential to provide physiotherapy students' information needs.

**Methodology:** 140 physiotherapy students, selected by convenience sampling. Students studying in third year, final year and Interns of Physiotherapy students were included. The participants filled a Google self-designed, close-ended questionnaire which was circulated via WhatsApp around different physiotherapist groups. Descriptive analysis was done using Microsoft excel.

**Results:** Out of 140 subjects, 53% use internet for diagnosing and treatment of the patients; 70% find internet useful for understanding the patient's condition better while 84% find textbooks reliable for diagnosis. 48% think maybe internet is hindering their academic performances, 31% think it's definitely hindering while 21% think it's not.

**Conclusion:** Physiotherapy students frequently experience need of internet for diagnosis and treatment for their patients. This also departs a thought that the students are not aware regarding the authenticity of materials given on internet. This study also implies that despite textbooks being safe, internet is being used for the sake of convenience by students.

**Keywords:** Physiotherapy students, Internet, Textbook, Treatment

## INTRODUCTION

Physiotherapy is an important allied health profession in the medical field where physiotherapists contribute an essential part to the care of individuals, from the young to the aged; including an essential role in elite sports. Physiotherapy involves using a professional assessment and reasoning process to select appropriate interventions or treatments for individual patients. The profession of physiotherapy uses an evidence-based, clinical reasoning process to underpin its management approaches. [1] The Internet has been proposed as a possible tool to facilitate access to this information. Investors spend vast resources on Internet-based "portals" and databases serving this aim. The internet advantages are: short transfer times, lower costs than paper-based dissemination, and on-demand, instant, worldwide availability. These features have simplified access to medical information for health care professionals and patients at a speed, and in a volume, previously unknown. [2] In recent years several information management systems designed to meet the information needs of practising physiotherapists have been implemented in internet in different countries and languages. Textbooks are considered by many to be the definitive sources of information. These

textbooks are published and updated periodically with the goal of providing readers with the most current information. They contain detailed analyses of medical topics by experts of the particular fields covered in the book. These books often are the main source of information for students and residents, and these readers usually believe the information found there is indisputable.<sup>[3]</sup>

The Internet widely used in physiotherapy field and no studies have explored the extent to which Indian physiotherapy students use internet resources for study, patients' evaluation and treatment purposes among India. This study aims to evaluate the frequency with which physiotherapy students experience; the need of digital information resources and academic textbooks to diagnose and treat patients. The wide spread availability of internet connected smart devices in the health care setting has the potential to provide physiotherapy students information needs.

## **METHODS**

Descriptive study was conducted at different physiotherapy colleges from Gujarat, India with Convenience sampling. Total sample size was 140 physiotherapy students. Study duration was September to November 2022. Students of Third year, Final year and interns in Physiotherapy field were included. First year, second year, BPT holders and MPT students and holders were excluded.

A self-designed Google Questionnaire was generated. Questionnaire was given to five Physiotherapists, who approved of the content of the questionnaire with few modifications of questions as required

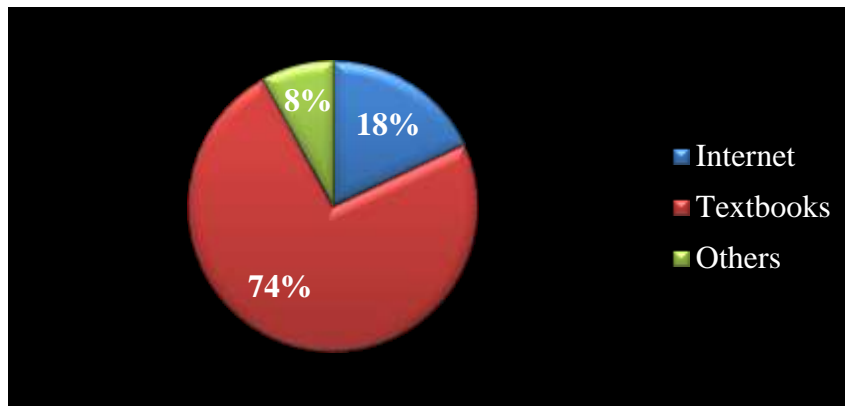
before circulating. The questionnaires were circulated via what's app in different physiotherapy student groups. Questionnaires comprised 2 sections; Part A, B. Part A: Subjective information and Part B: Preference of Internet versus Textbook usage for diagnosis and treatment planning in Physiotherapy students. The questionnaires took 5-10 minutes to complete.

## **STATISTICAL ANALYSIS**

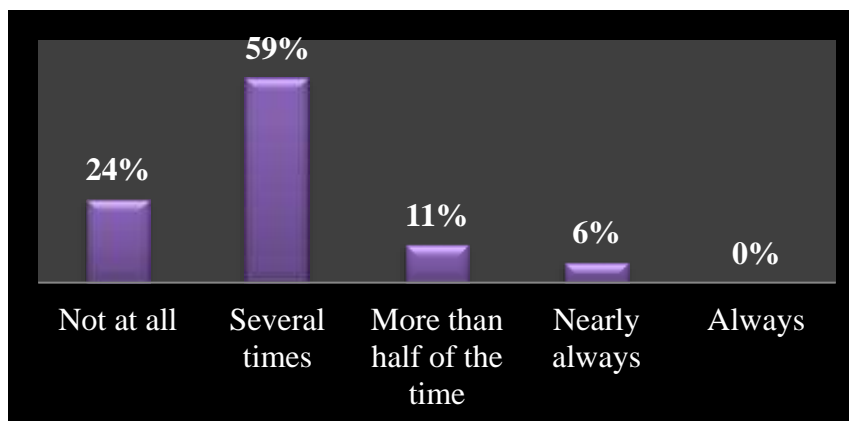
Using Microsoft Excel 2019 and was represented in form of graphs.

## **RESULT**

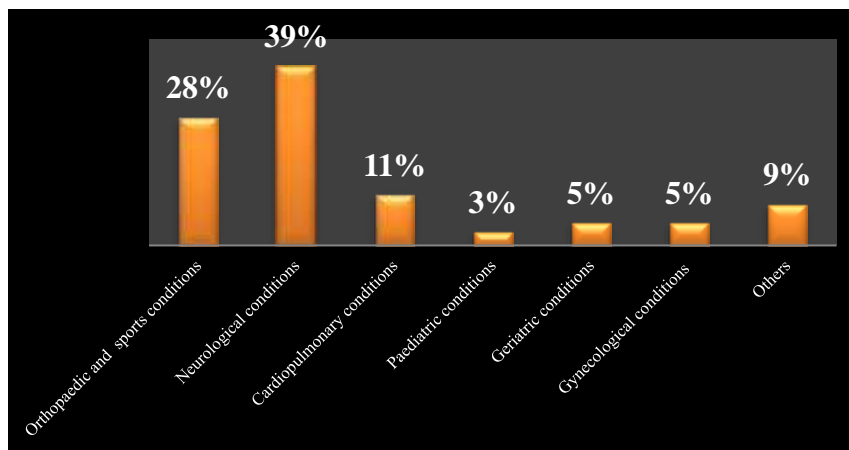
In present study 34% third year, 48% final year, 18% interns of physiotherapy students' participants. 53% physiotherapy students used Internet for diagnosing and treatment planning for patients. Graph 1 shows students more prefer for patient's diagnosis. Graph 2 shows frequency of usage of Internet for planning treatment for patients. Graph 3 shows for diagnosis of conditions Internet is used more. Graph 4 shows that usefulness of Internet in understanding the condition of patient better and planning treatment accordingly. Graph 5 shows reliability of Internet for diagnosing patients. Graph 6 shows treatment options available on Internet better than Textbooks or not. In graph 7 safeties in using Internet for diagnosing and treatment planning for patients. Graph 8 shows effectiveness of treatment protocols adapted from Internet. Graph 9 shows that affection in academic performance due excess Internet usage. Graph 10 shows that awareness of authenticity of information taken from Internet.



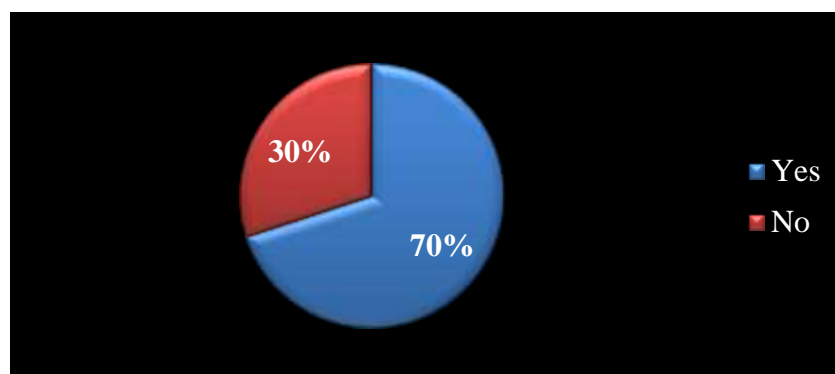
Graph 1: Students more prefer for patient's diagnosis



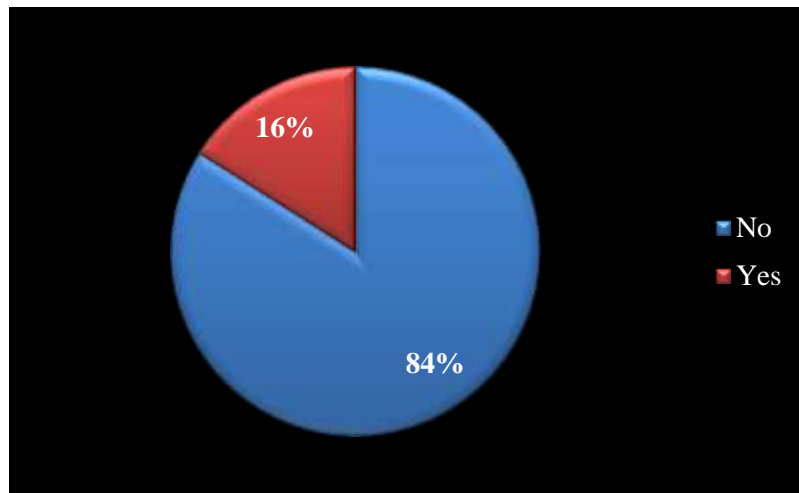
Graph 2: Frequency of usage of Internet for planning treatment for patients



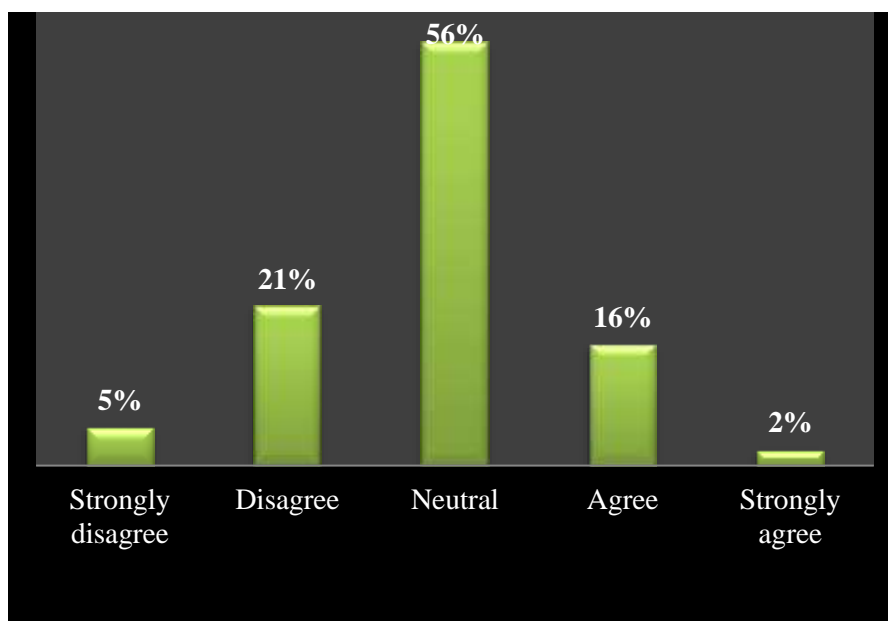
Graph 3: For diagnosis of conditions Internet is used more.



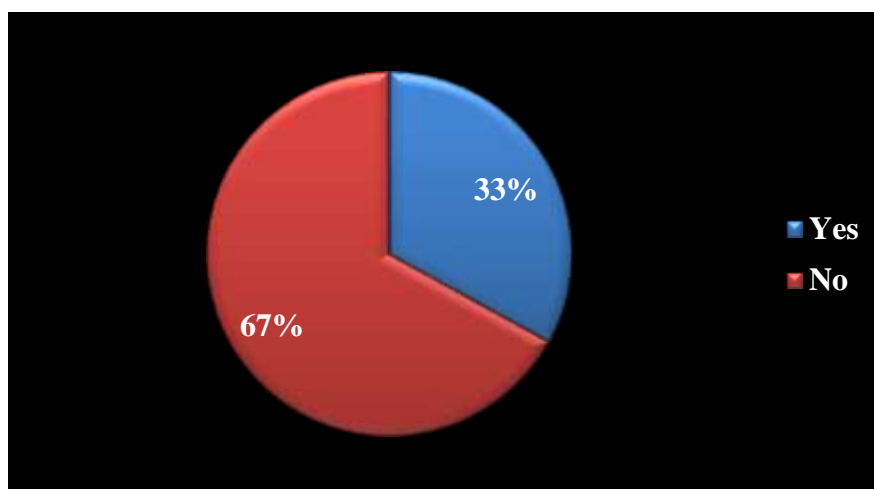
Graph 4: Usefulness of Internet in understanding the condition of patient better and planning treatment accordingly.



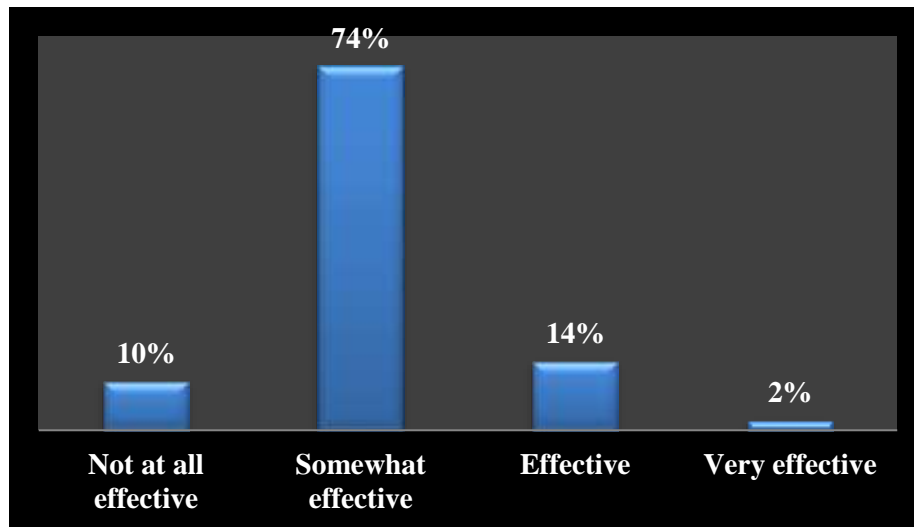
Graph 5: Reliability of Internet for diagnosing patients.



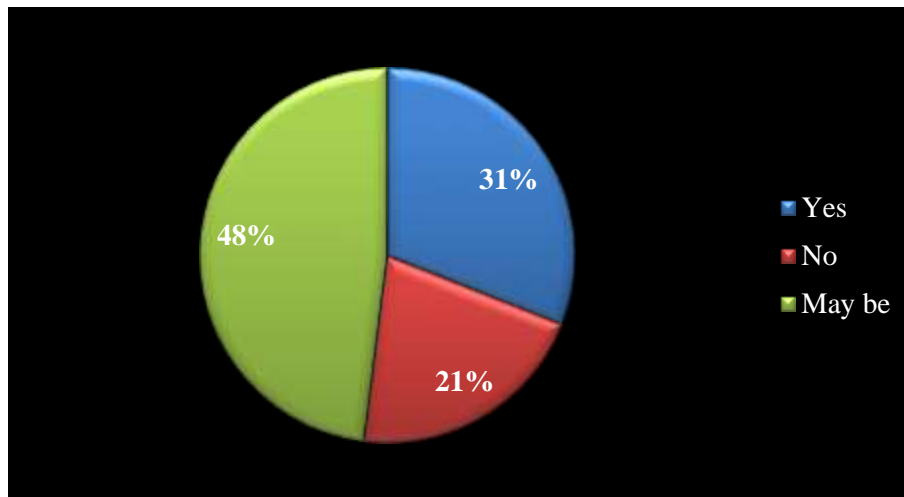
Graph 6: Treatment options available on Internet better than Textbooks or not.



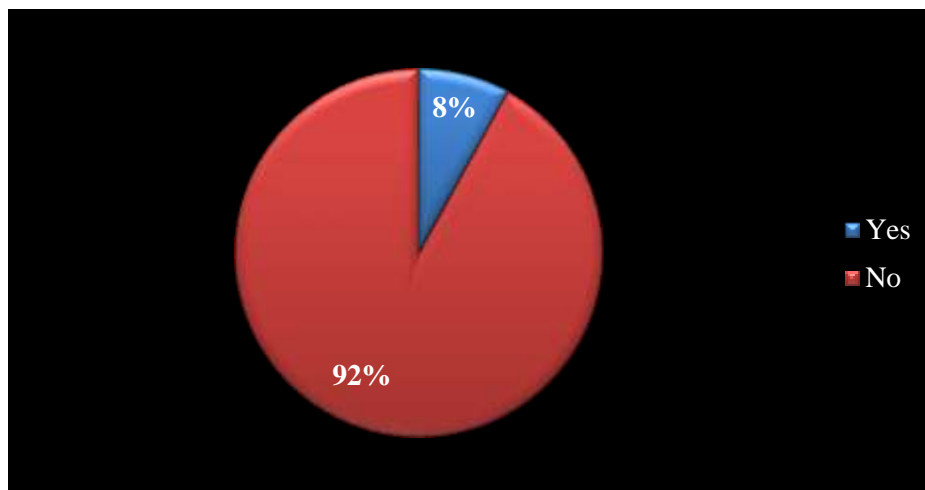
Graph 7: Safety in using Internet for diagnosing and treatment planning for patients.



Graph 8: Effectiveness of treatment protocols adapted from Internet.



Graph 9: Affection in academic performance due to excess Internet usage for a study purpose



Graph 10: Awareness of authenticity of information taken from Internet.

## DISCUSSION

In present study 74% physiotherapy students were prefer textbooks, 18% were prefer Internet and 8% students were prefer

others media for patient's diagnosis. Shabi IN et al Observed that medical colleagues were the major preferred source of medical

information followed by medical textbooks and conferences and update courses.<sup>[4]</sup>

In present study 59% physiotherapy students had several times usage Internet for planning treatment for patients. Contrast to present study. Bhatiya S et al found that 91% doctors ever searched the Internet for the most current diagnostic test or therapy for a disease.<sup>[5]</sup>

The present study found that 70% physiotherapy students better understanding the patients' conditions and planning treatments from Internets. Bhatiya S et al found that 39.5% doctors searched information relating to diagnosis, 31.5% told that they searched relating to treatment, followed by etiology (13.5%) and prognosis (9.5%).<sup>[5]</sup>

84% physiotherapy students do not think that Internet is reliable for diagnosing and treatment planning. Physiotherapy students were agreed for Textbooks more reliable for diagnosing and treatment planning. According to Tez M et al textbooks are crucial tools of medical education, especially when used as a source of learning by medical students and residents. It is the sole responsibility of the authors and editors of medical textbooks to keep these textbooks updated with current, accurate information.<sup>[3]</sup> 67% physiotherapy students agree for Internet was not safe for diagnosing and treatment planning for patients. In present study 74% physiotherapy students agreed with somewhat effective treatment protocols adapted from Internet. 14% students had effective treatment protocols, 10% students had agreed with not at all effective protocols and 2% students had agree with very effective protocols adapted from Internet. Andersson G et al suggested that the treatment approach combines the benefits of bibliography with book-length text materials and the support given online via web-pages and e-mail.<sup>[6]</sup>

31% physiotherapy students had affection in academic performance due excess internet usage for a study purposes. 48% students had not sure for affect academic

performance and 21% students had no affection in academic performance due to excess internet usage for a study purposes. Azizi SM et al found that medical students are experiencing problems due to their levels of Internet use. They lack proper sleep and therefore, have poor mental concentration. The level of this problem might become even greater, i.e., higher addiction level, if not stopped soon.<sup>[7]</sup> When students use the internet to study, most of them spend hours and hours on social media. Due to that academic performance affected.

In present study 92% physiotherapy students not aware of authenticity of information taken from internet. Bhatiya S et al found that physicians were asked about the training need, 26.5% told that they need training for accessing free full-text electronic journals and 25% need training to access the sources for best clinical evidence for patient care.<sup>[5]</sup>

## **CONCLUSION**

The physiotherapy students frequently experience need of Internet for diagnosis and treatment planning for their patients. This study also implies that despite textbooks being safe, internet is being used for the sake of convenience by students; without knowing the authenticity of the materials that are taken up by them online.

The major problems faced by physiotherapy students while using Internet for diagnosis and treatment followed by lack of searching skills and availability of too much information. Providing training for improvement of searching skills for obtaining up-to-date information for research and patient care will change their purpose of Internet use and help them to improve their practice of physiotherapy. Promotion of evidence-based learning and introduction of short-term bases of web site and whatever contents from Internet right from the undergraduate level as a long-term intervention would be immensely beneficial.

**Declaration by Authors**

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**Conflict of Interest:** The authors declare no conflict of interest.

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