

THE IMPACT OF YOUTUBE AS AN EDUCATIONAL RESOURCE FOR PHYSIOTHERAPY STUDENTS: DEPENDENCY AND PERCEIVED BENEFITS

(The project submitted towards partial fulfillment of final year research project for Bachelor of Physiotherapy).

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INTRODUCTION

Over the past decade, YouTube has grown from a simple video-sharing platform into a powerful educational resource across various fields, including healthcare and physiotherapy. The platform provides free access to diverse content such as:

- Tutorials on physiotherapy techniques
- Demonstrations of clinical procedures
- Expert lectures from professionals worldwide

In recent years, YouTube has emerged as a widely used platform for educational purposes, providing students with access to diverse content, including tutorials, practical demonstrations, and expert lectures. For physiotherapy students, YouTube offers an invaluable opportunity to visualize therapeutic techniques, understand anatomical concepts in greater detail, and reinforce classroom learning through self-paced study. This flexibility allows learners to engage with complex subject matter multiple times, enabling better retention and skill acquisition than traditional textbooks may offer alone. (2,3)

However, while it has numerous benefits, dependency on YouTube may impact student engagement with traditional academic resources such as textbooks, scholarly journals, and instructor-led training sessions.(2,4) YouTube is widely adopted in educational settings because it supports a variety of learning styles, including visual and auditory preferences. It provides on-demand access to expert knowledge that may not be readily available through other means. Yet, unlike established academic resources, YouTube videos lack a standardized quality assurance process, posing significant concerns about the accuracy, reliability, and educational integrity of the content. This variability challenges educators and learners alike in discerning credible materials from those that might be outdated, biased, or pseudoscientific.(2,5,6)

This study aims to investigate the extent of physiotherapy student reliance on YouTube and the perceived benefits of using it as an educational resource. Understanding how students integrate YouTube content into their learning practices will help educators recognize its role within the broader academic ecosystem and develop strategies to optimize its use.(4)

Physiotherapy students, in particular, benefit from visualizing techniques that are otherwise difficult to understand through textbooks alone. The ability to revisit and replay videos provides a valuable tool for reinforcing skill-based learning, supplementing hands-on practice, and bridging the gap between theory and clinical application.(3,4) This multimedia approach aligns with contemporary educational theories advocating for blended learning models that combine digital resources with traditional pedagogy.

YouTube, the largest Internet video-sharing site at the time of this review, is also extensively used for patient education, public health awareness, and professional development in healthcare fields. Videos on the platform facilitate sharing, editing, and community interaction, which enhances collaborative learning. The brief and concise nature of educational videos, ease of access, and adaptability of viewing settings increase user satisfaction and promote consistent engagement with learning materials.(1,7)

Concerns About Dependency:

While YouTube offers numerous advantages, there is a growing concern about students relying too heavily on online videos rather than traditional academic resources such as textbooks, journals, and instructor-led training. Some key issues include:

- Lack of standardized content verification: Not all videos are scientifically accurate or evidence-based.(6)
- Reduced critical thinking: Passive learning through video consumption might limit the development of analytical skills necessary for clinical reasoning.(2,5)
- Over-dependence on digital learning: Excessive reliance on videos could affect students' ability to retain knowledge from textbooks and classroom-based learning methods, potentially impacting academic performance and professional competence. (5,8,9)

Purpose of the Study:

This research aims to assess the extent of dependency on YouTube as an educational tool among physiotherapy students and evaluate its perceived benefits. The study will provide insights on how students balance video-based resources with traditional learning and help identify potential areas where guidance or curriculum modification may enhance educational outcomes.(4)

NEED OF THE STUDY

As healthcare education evolves, digital resources like YouTube have become integral to student's learning. Despite its popularity, there is a lack of formal research on how YouTube impacts physiotherapy education, specifically in terms of student dependency and perceived benefits.

This study addresses the gap by examining whether YouTube effectively complements formal education and how students perceive its usefulness in practical and theoretical learning. Hence the need.

With the increasing digitalization of education, YouTube has become a primary learning tool. However, formal studies examining its effectiveness in physiotherapy education are limited.

Key Reasons for Conducting this Study

1. **Lack of Formal Research:** Despite YouTube's popularity, scientific validation of its effectiveness in physiotherapy education is minimal.
2. **Understanding Learning Behaviours :** It is essential to evaluate how students use YouTube – whether as a complementary tool or a primary source of learning.
3. **Balancing Traditional & Digital Learning:** Identifying whether students over-rely on YouTube could help educators improve teaching methods by integrating digital tools with traditional classroom learning.

AIM

To evaluate the role of YouTube as an educational resource for physiotherapy students, focusing on its influence on learning behaviors, dependency and perceived benefits in terms of academic performance and practical skill acquisition

OBJECTIVE

1. To determine the frequency and purpose of YouTube usage among physiotherapy students.
2. To assess the level of dependency on YouTube for academic and practical learning.
3. To identify the perceived benefits and challenges of using YouTube as a learning tool.
4. To explore the relationship between YouTube usage and academic or practical performance.

REVIEW OF LITERATURE

1. **Maziriri, E. T., Gapa, P. & Chuchu T. (2020) – Student Perceptions Towards the use of YouTube as An Educational Tool for Learning and Tutorials.**

The rapid development of Internet technologies has encouraged an ever-so developing engagement with 'making and doing' culture for creativity. The Internet provides an ideal platform for hosting learning resources, including videos. This has led to Academic institutions are progressively integrating new information and communication technologies (ICTs) in their educational systems (e.g. e-learning platforms, tablet PCs instant messaging software).

2. **Vernon Curran,Lisa Fleet (2020) – YouTube as an Educational Resource in Medical**

Education: scoping review.

Recent studies confirm YouTube’s increasing role in medical and physiotherapy education with students using the platform for visualizing complex procedures. Research shows that It’s a key resource for students to grasp practical concepts better than traditional methods

3. **Pilar Colás-Bravo and Iván Quintero-Rodríguez (2022) - YouTube as a Digital Resource for Sustainable Education.**

The extensive use of social networks by people of all ages and the wide range of freely available content there can be very useful for sustainable education. This study has implications in sustainable education as YouTube is a tool that breaks down barriers and can be adjusted to the needs of a population.

4. **Arbaz Khan and Mubashir Saeed (2023) - A Study of the Effectiveness and Impact of YouTube on Student Learning Outcomes.**

The study's findings indicate a positive response from participants regarding using YouTube as learning tool. All students in the study reported utilizing YouTube for educational purposes. Furthermore, the statistical analysis revealed that the mean score M-3.86 , F-3.91 with standard deviation,0.31 & 0.24. no statistically significant difference was found between male and female students in their usage, leading to the acceptance of the null hypothesis.

METHODOLOGY

- Study Design: Observational Cross-sectional study
- Study Type: Survey based
- Target Population: Physiotherapy students
- Sample Size: 120
- Sampling Method: Simple Random Sampling
- Sampling Duration: 6 month
- Physiotherapy Colleges.

MATERIALS

- Pen
- Paper
- Consent Form
- Self -Made Questionnaire

INCLUSION CRITERIA

1. Under graduates and Post graduates physiotherapy (BPTs, MPT’s) Students.
2. Both male and females are included.
3. Students actively using YouTube for educational purposes.

EXCLUSION CRITERIA

- 1) Diploma in Physiotherapy (DPTs)
- 2) Students who do not use YouTube for learning.
- 3) Students unwilling to participate in the study.

OUTCOME MEASURES

- Self – made Questionnaire.
- Identification of YouTube dependency among physiotherapy students using a Likert scale.
- Insights into how YouTube affects learning behavior, academic performance and practical skills.

Likert Scale					
Scale	Left-most	Left of center	Center	Right of center	Right-most
Rating	1	2	3	4	5
Satisfaction	Very dissatisfied	Dissatisfied	Neither satisfied / dissatisfied	Satisfied	Very satisfied
Quality	Very poor	Poor	Fair	Good	Very good
Frequency	Never	Rarely	Occasionally	Frequently	Very frequently
Performance	Awfully	Not well	Work in progress	Well	Superbly
Importance	Not at all important	Slightly important	Moderately important	Very important	Extremely important
Focus	Much less focus	Less focus	Maintain	More focus	Much more focus

PROCEDURE

- 1) Firstly, permission was taken from institutional ethical committee of TILAK MAHARASHTRA VIDYAPEETH, department of Physiotherapy and Ethical clearance was taken from institutional ethical committee of Tilak Maharashtra Vidyapeeth – College of Physiotherapy.
- 2) The aims and objectives of the research was explained to the participants and those who fulfilling the inclusion criteria was included in the study.
- 3) The questionnaire was validated by the experienced physiotherapists in the field of rehabilitation.
- 4) The review and rating to examine and evaluate each survey question for its relevance, clarity, sequence, and concept was taken from the physiotherapist.
- 5) Each Physiotherapist comments was thoroughly reviewed to improve accuracy, quality and validity of the survey questions.
- 6) Before conducting the survey consent of the physiotherapist participating in the survey was taken.
- 7) An electronic survey was conducted and distributed via WhatsApp, and E- mail.
- 8) In, addition the physiotherapists which was contacted was requested to forward the survey among the physiotherapist they know.
- 9) The Physiotherapists was asked to select an appropriate option from the questionnaire.
- 10) The data was collected and analysed and appropriate results was found out.

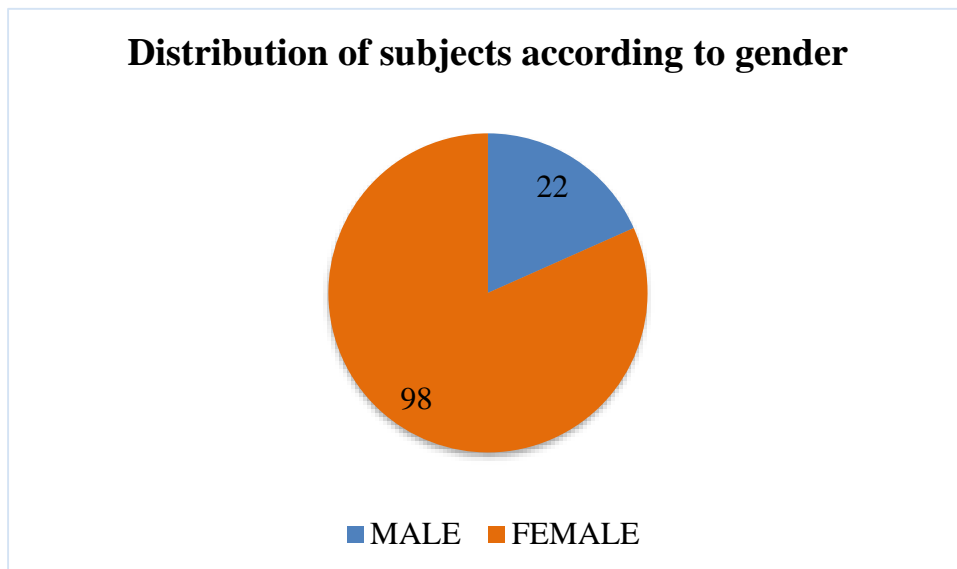
DATA ANALYSIS

1. Demographic Data –

Table no. 1: Distribution of subjects according to gender.

Gender	No. of Participants
MALE	22
FEMALE	98

Graph 1: Distribution of subjects according to gender.

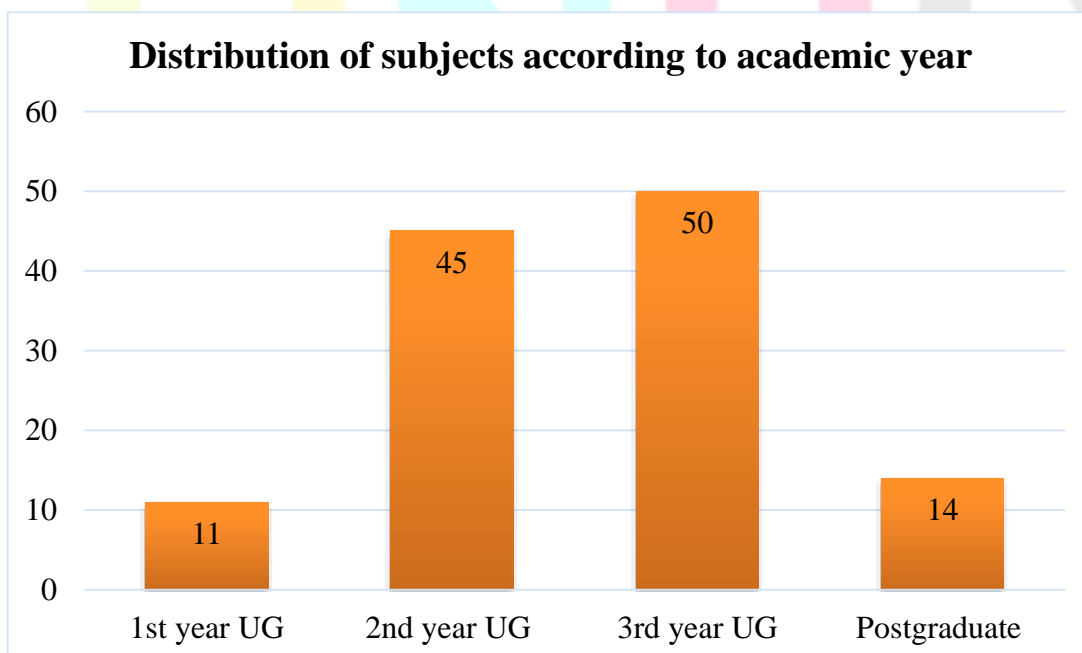


Interpretation – According to the pie chart 18.33% of the subject are male and 81.67% are female

Table no. 2 Distribution of subjects according to academic year.

Academic Year	No. Students Participated
1st year UG	11
2nd year UG	45
3rd year UG	50
Postgraduate	14

Graph 2: Distribution of subjects according to academic year.



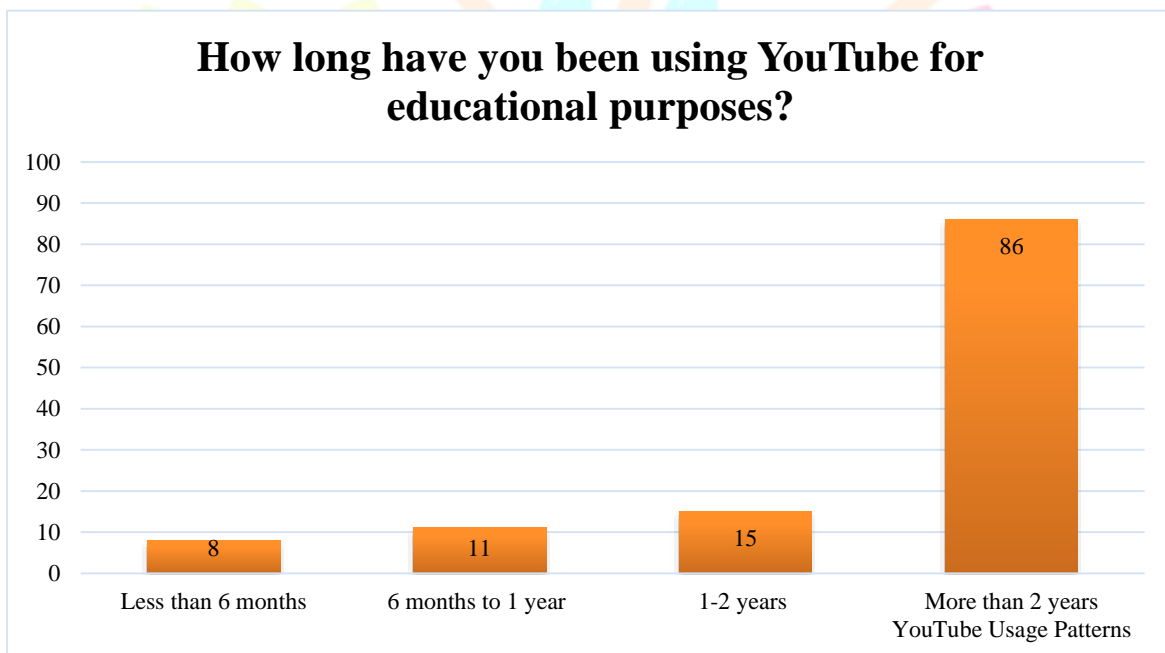
Interpretation – According to the bar chart, 9.17% of the participants are from 1st year UG, 37.5% from 2nd year UG, 41.67% from 3rd year UG, and 11.67% are Postgraduate students. This indicates that majority of the participants belong to the 3rd year, followed by the 2nd year group, showing higher involvement of senior students in the study.

2. To determine the frequency and purpose of YouTube usage

Table no. 3: How long have you been using YouTube for educational purposes?

Responses	No. of responses given by students
Less than 6 months	8
6 months to 1 year	11
1-2 years	15
More than 2 years YouTube Usage Patterns	86

Graph no. 3: How long have you been using YouTube for educational purposes?

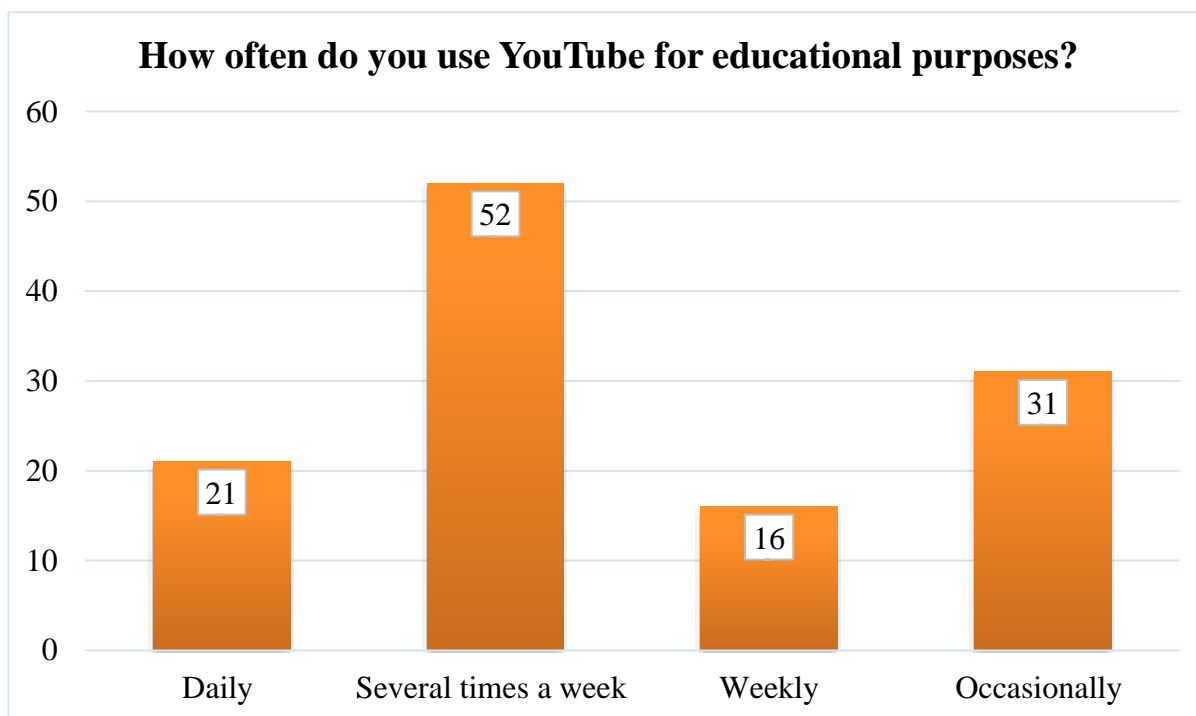


Interpretation – According to the bar chart, 6.67% of the participants have been using YouTube for less than 6 months, 9.17% for 6 months to 1 year, 12.5% for 1–2 years, and the majority, 71.66%, have been using YouTube for more than 2 years. This indicates that most physiotherapy students have long-term exposure to YouTube as an educational resource.

Table no. 4: How often do you use YouTube for educational purposes?

Responses	No. of responses given by students
Daily	21
Several times a week	52
Weekly	16
Occasionally	31

Graph no. 4: How often do you use YouTube for educational purposes?

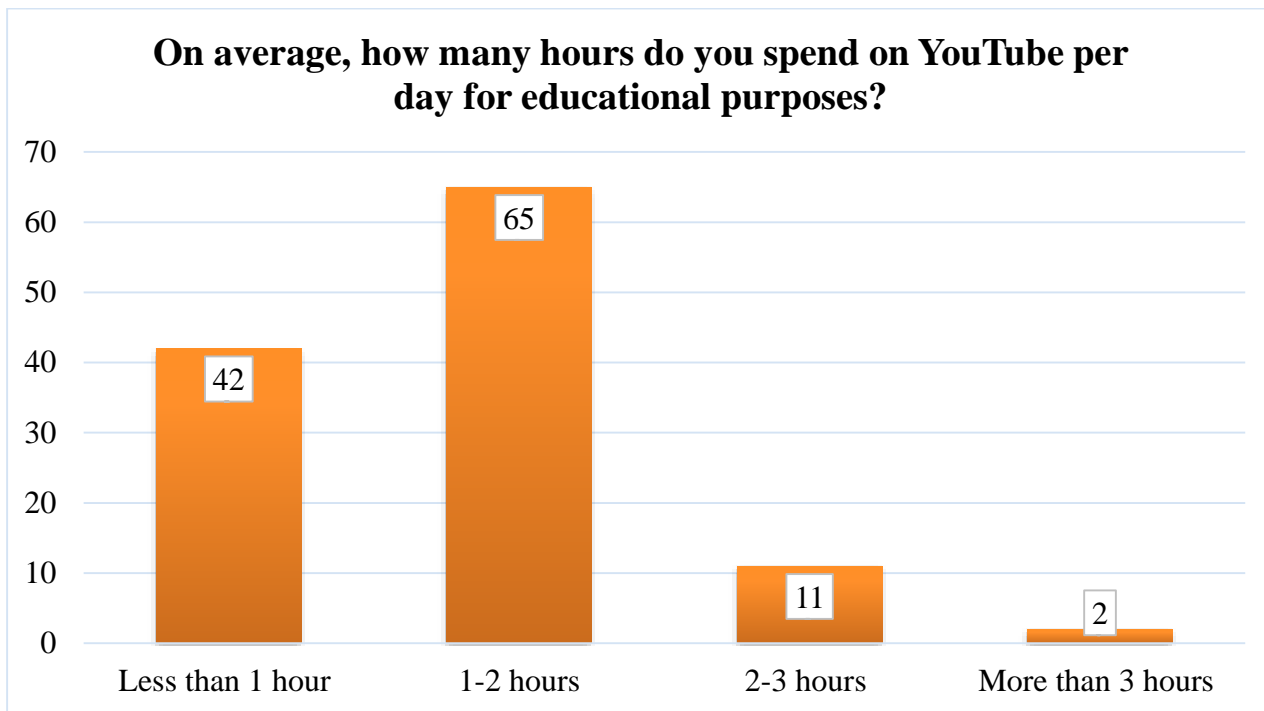


Interpretation – According to the bar chart, **17.5%** of the students use YouTube **daily**, **43.33%** use it **several times a week**, **13.33%** use it **weekly**, and **25.84%** use it **occasionally**. This shows that a majority of students access YouTube multiple times a week for learning or related purposes.

Table no. 5: On average, how many hours do you spend on YouTube per day for educational purposes?

Responses	No. of responses given by students
Less than 1 hour	42
1-2 hours	65
2-3 hours	11
More than 3 hours	2

Graph no. 5: On average, how many hours do you spend on YouTube per day for educational purposes?

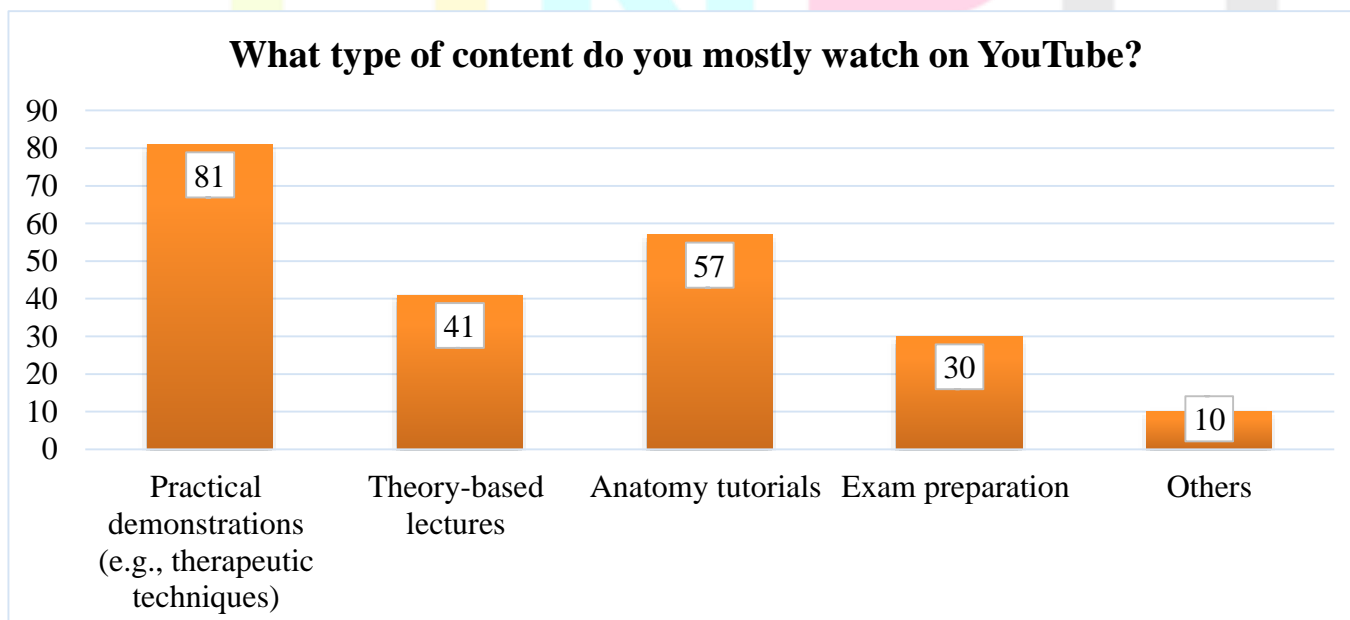


Interpretation – According to the bar chart, **35%** of students spend **less than 1 hour** on YouTube, **54.17%** spend **1–2 hours**, **9.17%** spend **2–3 hours**, and **1.67%** spend **more than 3 hours** daily. This indicates that most students engage with YouTube for moderate durations, typically between 1 to 2 hours per day.

Table no. 6: What type of content do you mostly watch on YouTube?

Responses	No. of responses given by students
Practical demonstrations (e.g., therapeutic techniques)	81
Theory-based lectures	41
Anatomy tutorials	57
Exam preparation	30
Others	10

Graph no. 6: What type of content do you mostly watch on YouTube?



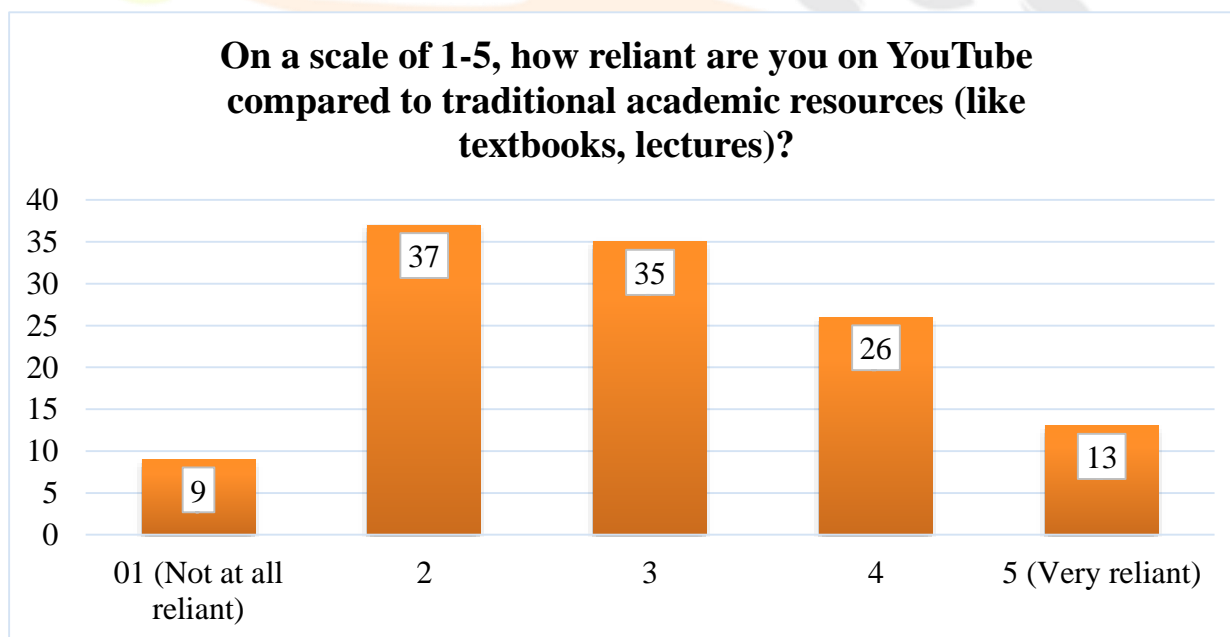
Interpretation – According to the bar chart, **67.5%** of students use YouTube for **practical demonstrations** such as therapeutic techniques, **34.17%** for **theory-based lectures**, **47.5%** for **anatomy tutorials**, **25%** for **exam preparation**, and **8.33%** for **other purposes**. This indicates that the primary use of YouTube among physiotherapy students is for observing and learning practical skills.

3. To assess the level of dependency on YouTube for academic and practical learning

Table no. 7: On a scale of 1-5, how reliant are you on YouTube compared to traditional academic resources (like textbooks, lectures)?

Responses	No. of responses given by students
01 (Not at all reliant)	9
2	37
3	35
4	26
5 (Very reliant)	13

Graph no. 7: On a scale of 1-5, how reliant are you on YouTube compared to traditional academic resources (like textbooks, lectures)?



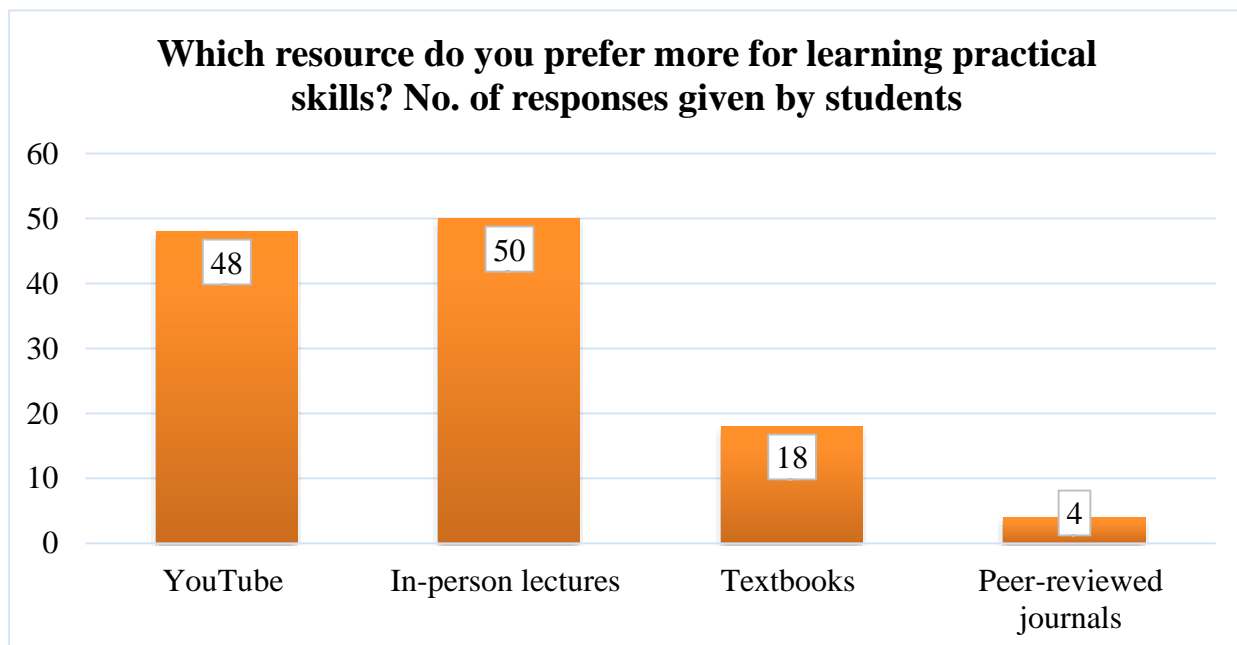
Interpretation – According to the bar chart, 7.5% of students reported being not at all reliant on YouTube, 30.83% rated their reliance level as 2, 29.17% rated it as 3, 21.67% rated it as 4, and 10.83% considered themselves very reliant on YouTube. This suggests that the majority of physiotherapy students show a moderate level of dependency on YouTube as an educational resource.

Table no. 8: Which resource do you prefer more for learning practical skills?

Responses	No. of responses given by students
YouTube	48
In-person lectures	50

Textbooks	18
Peer-reviewed journals	4

Graph no. 8: Which resource do you prefer more for learning practical skills?

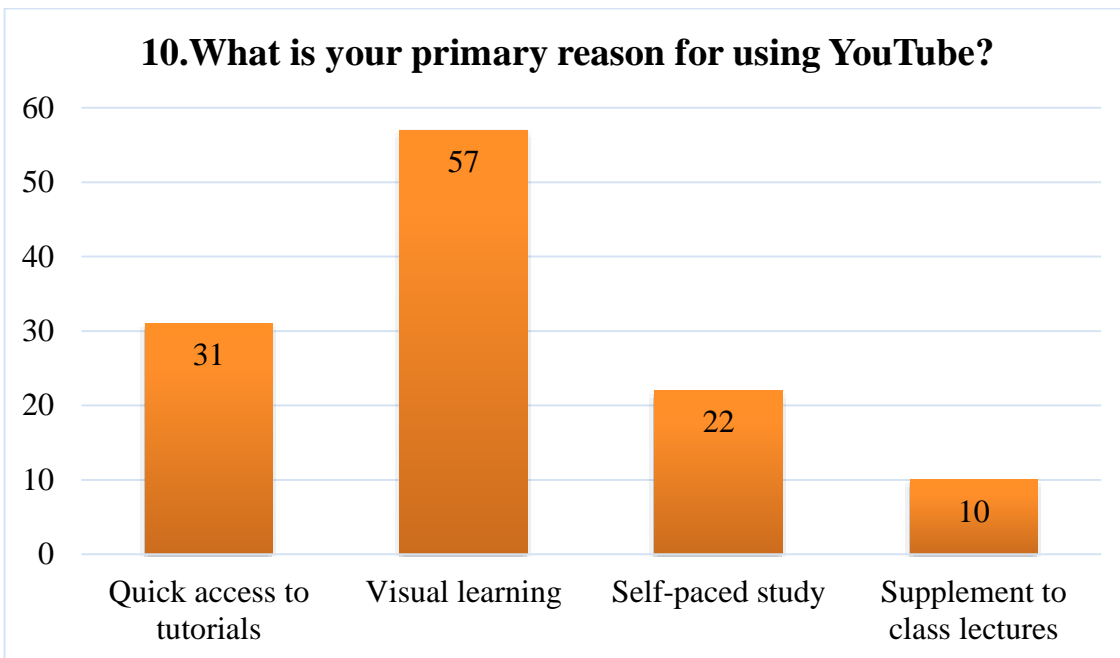


Interpretation – According to the bar chart, **40%** of students prefer **in-person lectures**, **40%** rely on **YouTube**, **15%** use **textbooks**, and only **3.33%** refer to **peer-reviewed journals**. This indicates that while traditional classroom teaching remains slightly more preferred, YouTube has emerged as an equally significant learning resource among physiotherapy students.

Table no. 9: What is your primary reason for using YouTube?

Responses	No. of responses given by students
Quick access to tutorials	31
Visual learning	57
Self-paced study	22
Supplement to class lectures	10

Graph no. 9: What is your primary reason for using YouTube?



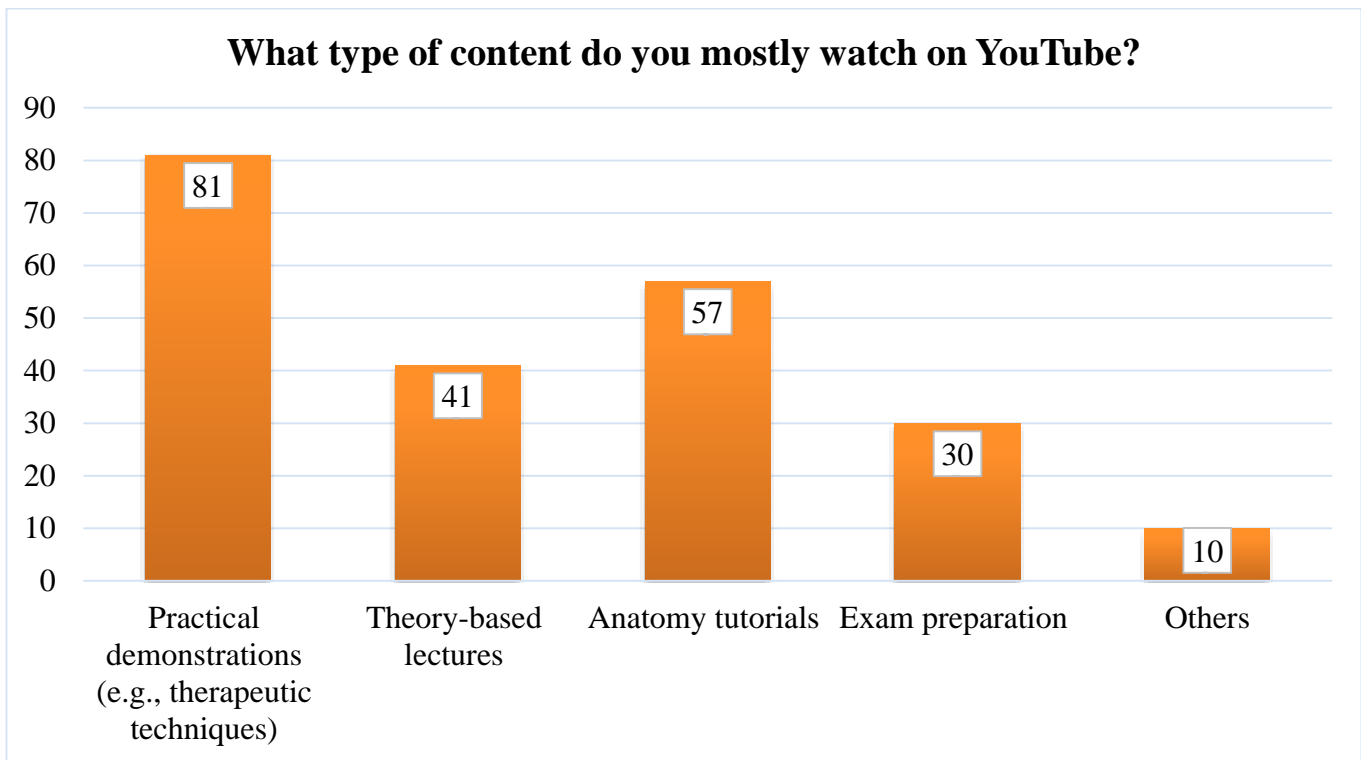
Interpretation – According to the bar chart, **25.83%** of students use YouTube for **quick access to tutorials**, **47.5%** prefer it for **visual learning**, **18.33%** use it for **self-paced study**, and **8.33%** consider it a **supplement to class lectures**. This indicates that the majority of students value YouTube primarily for its visual and easily accessible learning content.

4. To identify the perceived benefits and challenges of using YouTube as a learning tool.

Table no. 10: What type of content do you mostly watch on YouTube?

Responses	No. of responses given by students
Practical demonstrations (e.g., therapeutic techniques)	81
Theory-based lectures	41
Anatomy tutorials	57
Exam preparation	30
Others	10

Graph no. 10: What type of content do you mostly watch on YouTube?

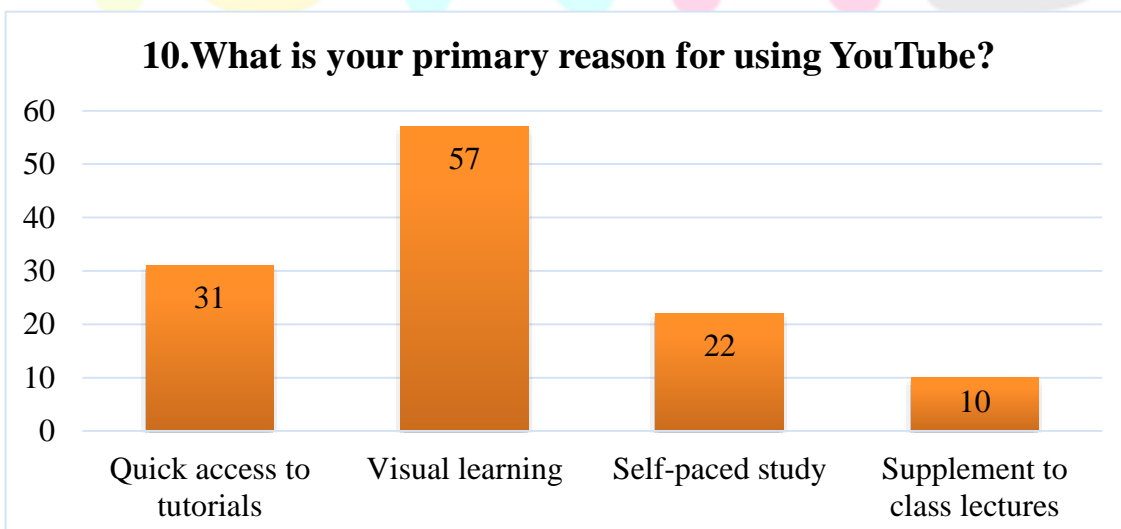


Interpretation – According to the bar chart shows that **67.5%** of students prefer **practical demonstrations** such as therapeutic techniques, **47.5%** watch **anatomy tutorials**, **34.17%** view **theory-based lectures**, **25%** use it for **exam preparation**, and **8.33%** watch **other content**. This indicates that students primarily perceive YouTube as a beneficial tool for enhancing **practical understanding and visual learning**, which supports skill development and reinforces classroom knowledge.

Table no. 11: What is your primary reason for using YouTube?

Responses	No. of responses given by students
Quick access to tutorials	31
Visual learning	57
Self-paced study	22
Supplement to class lectures	10

Graph no.11: What is your primary reason for using YouTube?



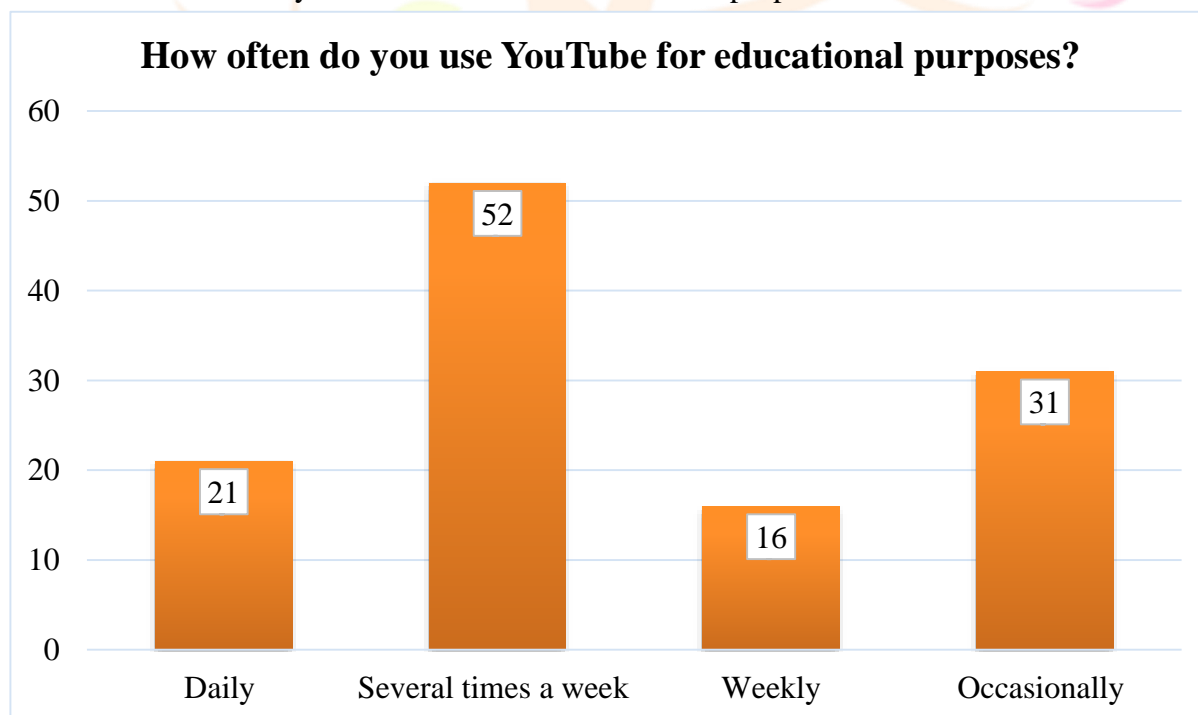
Interpretation – According to the the bar chart reveals that **47.5%** of students use YouTube for **visual learning**, **25.83%** for **quick access to tutorials**, **18.33%** for **self-paced study**, and **8.33%** as a **supplement to class lectures**. This indicates that the major perceived benefit of YouTube among physiotherapy students is its ability to provide **visual and easily understandable content**, supporting independent and flexible learning.

5. To explore the relationship between YouTube usage and academic or practical performance.

Table no.12: How often do you use YouTube for educational purposes?

Responses	No. of responses given by students
Daily	21
Several times a week	52
Weekly	16
Occasionally	31

Graph no. 12: How often do you use YouTube for educational purposes?

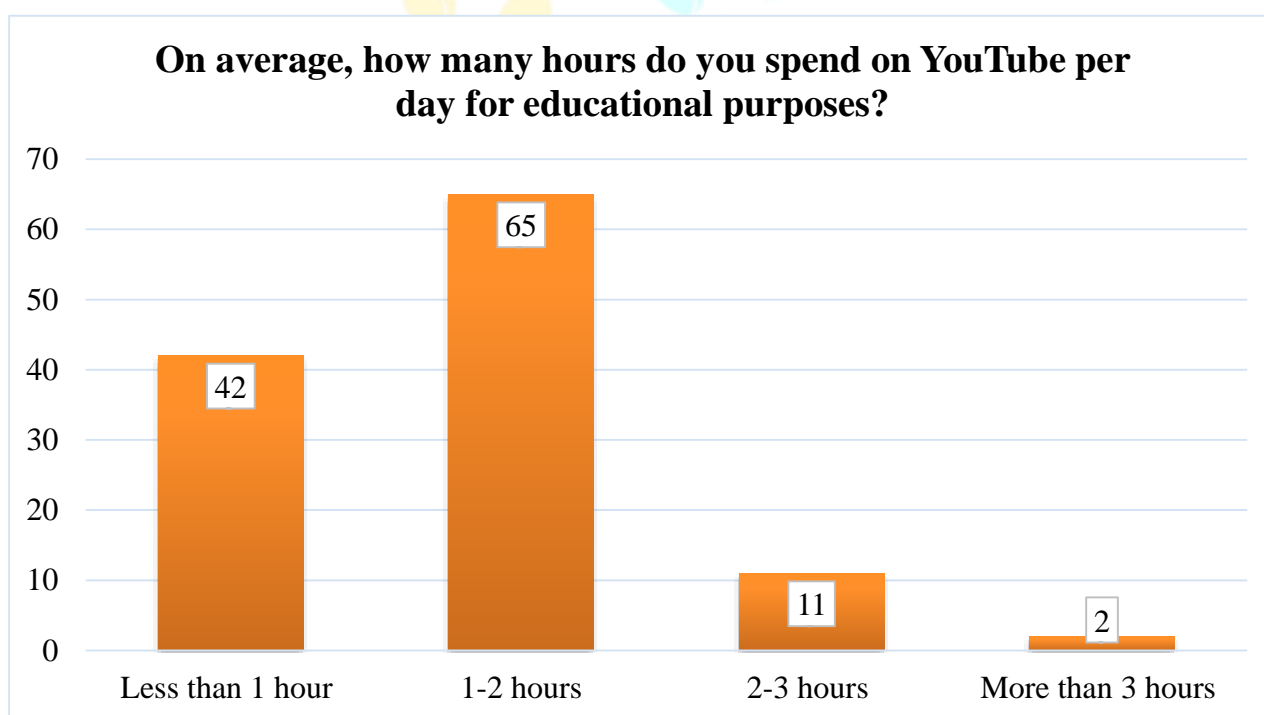


Interpretation –According to the bar chart shows that **43.33%** of students use YouTube **several times a week**, **25.84%** use it **occasionally**, **17.5%** use it **daily**, and **13.33%** use it **weekly**. This suggests that frequent YouTube usage may positively influence **academic and practical learning outcomes**, as regular engagement with educational videos can enhance understanding and reinforce practical skills in physiotherapy.

Table no. 13: On average, how many hours do you spend on YouTube per day for educational purposes?

Responses	No. of responses given by students
Less than 1 hour	42
1-2 hours	65
2-3 hours	11
More than 3 hours	2

Graph no. 13: On average, how many hours do you spend on YouTube per day for educational purposes?

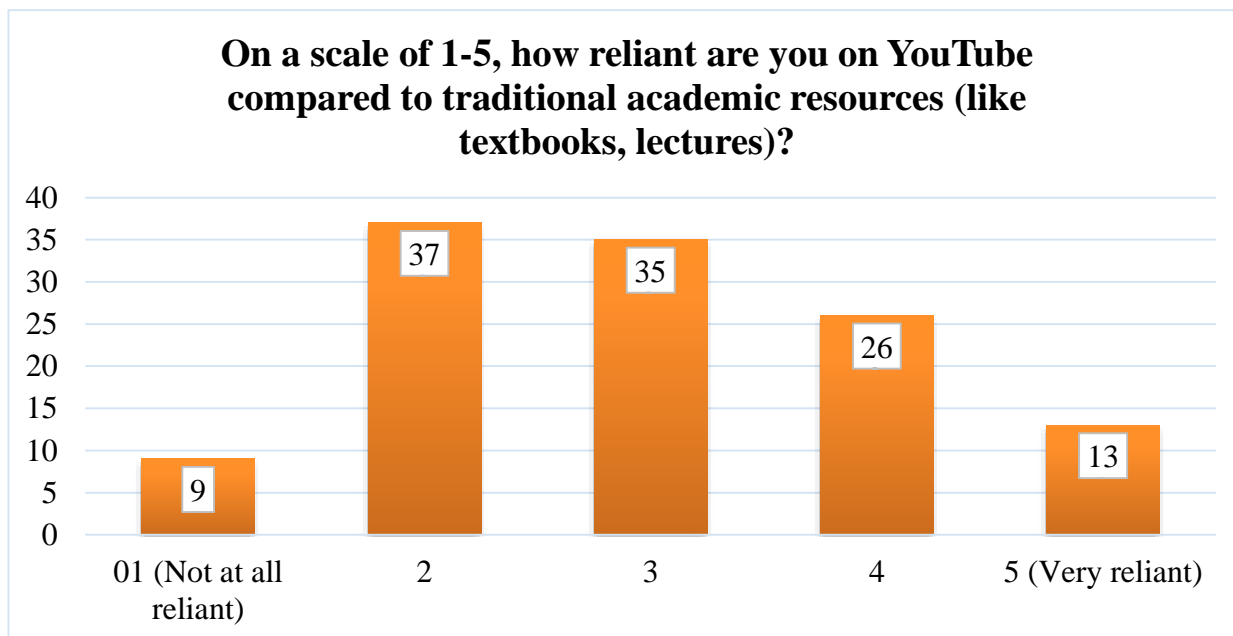


Interpretation –According to the bar chart indicates that **54.17%** of students spend **1–2 hours** daily on YouTube, **35%** spend **less than 1 hour**, **9.17%** spend **2–3 hours**, and only **1.67%** spend **more than 3 hours**. This suggests that moderate daily usage of YouTube (1–2 hours) is most common and may contribute positively to **academic learning and practical skill enhancement** among physiotherapy students.

Table no. 14: On a scale of 1-5, how reliant are you on YouTube compared to traditional academic resources (like textbooks, lectures)?

Responses	No. of responses given by students
01 (Not at all reliant)	9
2	37
3	35
4	26
5 (Very reliant)	13

Graph no. 14: On a scale of 1-5, how reliant are you on YouTube compared to traditional academic resources (like textbooks, lectures)?



Interpretation – According to the **bar chart** shows that **30.83%** of students rated their reliance on YouTube at level **2**, **29.17%** at level **3**, **21.67%** at level **4**, **10.83%** as **very reliant (5)**, and **7.5%** as **not at all reliant (1)**. This indicates that most physiotherapy students demonstrate a **moderate level of dependency** on YouTube, suggesting that while they find it useful for academic and practical learning, they still rely on other educational resources for comprehensive understanding.

DISCUSSION

The findings of this study highlight the significant role that YouTube plays in the academic and practical learning of physiotherapy students. The results demonstrate that a large proportion of students have been using YouTube for more than two years, suggesting that it has become a well-established component of their learning routine. The long-term usage pattern indicates that physiotherapy students perceive YouTube not merely as a supplementary platform but as an integral educational resource that complements classroom instruction and clinical training.

1. Frequency and Duration of Use

The analysis reveals that a majority of students (43.33%) use YouTube several times a week, with 17.5% engaging daily. Furthermore, over half of the respondents (54.17%) reported spending 1–2 hours per day on YouTube. This moderate yet consistent usage pattern suggests that students have incorporated YouTube as a regular part of their study habits rather than as an occasional or purely recreational activity. The findings are consistent with earlier research by **Curran and Fleet (2020)**, which found that medical and allied health students frequently utilize YouTube to reinforce classroom learning and visualize complex concepts. Regular exposure to video-based learning materials may help improve comprehension and retention, especially for practical and procedural knowledge in physiotherapy.

2. Type of Content and Learning Purpose

The study further shows that 67.5% of students primarily use YouTube to watch *practical demonstrations* such as therapeutic techniques, while 47.5% watch *anatomy tutorials* and 34.17% view *theory-based lectures*. This pattern strongly suggests that students are more inclined toward visual and experiential learning methods. In physiotherapy education, where skill-based learning is essential, the ability to visualize clinical techniques and observe step-by-step demonstrations offers a substantial advantage over traditional text-based resources. These results align with **Arbaz Khan and Mubashir Saeed (2023)**, who reported that students find YouTube particularly effective for understanding procedural and hands-on skills.

Moreover, when asked about the primary reason for using YouTube, 47.5% of students cited *visual learning* as the main factor, followed by 25.83% who appreciated *quick access to tutorials*. This indicates that students value YouTube's accessibility and its ability to simplify complex information through visual representation. The flexibility to pause, replay, and review videos at one's own pace supports *self-regulated learning*, a key aspect of competency development in healthcare education.

3. Dependency and Preference for Learning Platforms

Regarding dependency, the majority of students (30.83% at level 2 and 29.17% at level 3) exhibited moderate reliance on YouTube. Only 10.83% considered themselves *very reliant*, suggesting that while YouTube is an important educational supplement, it has not entirely replaced traditional learning resources. This moderate dependency aligns with the goal of blended learning, which combines digital tools with conventional academic approaches for optimal outcomes.

When comparing YouTube to other learning resources, 40% of students preferred *in-person lectures*, while an equal percentage (40%) relied on *YouTube*. This balance indicates that YouTube is now viewed as nearly equivalent to classroom instruction in terms of learning value. However, only 15% of students referred to *textbooks* and a mere 3.33% to *peer-reviewed journals*, raising concerns about the declining use of evidence-based academic literature. This shift suggests that while digital platforms like YouTube make learning more accessible and engaging, there remains a need to reinforce the importance of validated and scholarly sources for academic rigor.

4. Relationship Between YouTube Usage and Learning Outcomes

Frequent engagement with YouTube, observed in students using it several times per week, appears to correlate with enhanced academic and practical understanding. Students who use YouTube regularly may benefit from the platform's dynamic and multimodal presentation of information, which caters to visual and auditory learners. According to **Pilar Colás-Bravo and Iván Quintero-Rodríguez (2022)**, YouTube's flexibility and adaptability foster sustainable learning by allowing students to learn according to their pace and comprehension level.

However, while the benefits are evident, over-dependence on YouTube poses potential challenges. The absence of standardized content verification raises concerns about the credibility and accuracy of videos. As noted in the literature, the unregulated nature of online educational content can expose students to misinformation or outdated practices. Moreover, reliance on video-based learning may limit critical thinking, as students might passively consume information without engaging in analytical reflection or problem-solving exercises that are essential in clinical decision-making.

5. Educational Implications

The study underscores the need for educators to integrate YouTube strategically into physiotherapy curricula. By curating reliable and evidence-based channels, instructors can guide students toward accurate resources while maintaining academic standards. YouTube can serve as a supplementary teaching tool for pre-class preparation (flipped learning), clinical skill reinforcement, and continuing education. Additionally, training students to critically evaluate online content will help them distinguish credible sources from unreliable ones, enhancing their digital literacy and professional competence.

6. Alignment with the Objectives

The findings align well with the study's objectives:

- **Frequency and Purpose:** Most students frequently use YouTube for educational purposes, particularly practical learning.
- **Dependency:** Students show moderate reliance, suggesting balanced use of digital and traditional learning methods.
- **Perceived Benefits and Challenges:** Students perceive strong benefits in visual learning and accessibility but acknowledge challenges related to reliability.
- **Relationship with Academic Performance:** Consistent, moderate use of YouTube appears to positively influence both theoretical understanding and practical skill acquisition.

In conclusion, YouTube has emerged as a transformative tool in physiotherapy education, bridging the gap between theory and practice. While it enhances engagement and comprehension, it must be used judiciously, with guidance from educators to ensure accuracy and balanced learning habits.

RESULTS

The study evaluated YouTube as an educational resource among 120 physiotherapy students (81.67% female, 18.33% male), with higher participation from senior students (41.67% 3rd year UG, 37.5% 2nd year UG). Most students (71.66%) had over 2 years of experience using YouTube, with 43.33% accessing it several times a week and 17.5% daily. Daily usage was mainly 1–2 hours (54.17%), while 35% spent less than 1 hour.

Students preferred practical demonstrations (67.5%), anatomy tutorials (47.5%), theory lectures (34.17%), and exam prep videos (25%). Dependency on YouTube was moderate, with levels 2–4 reported by 81.67%. YouTube (40%) was as popular as in-person lectures (40%) over textbooks (15%) and journals (3.33%). Key reasons for use included visual learning (47.5%), quick tutorials (25.83%), and self-paced study (18.33%).

CONCLUSION

The study concludes that YouTube plays a prominent and beneficial role in physiotherapy education by offering students easy access to diverse, visual, and interactive learning materials. Most students use YouTube regularly for 1–2 hours daily, primarily for practical demonstrations and anatomy tutorials, reflecting its effectiveness in bridging theoretical knowledge with practical application.

While the dependency level remains moderate, indicating a healthy balance between digital and traditional learning methods, educators should encourage students to critically assess video content and integrate it meaningfully with evidence-based academic resources.

YouTube thus serves as an effective supplementary educational platform, enhancing student engagement, skill development, and conceptual understanding in physiotherapy. Future research could further explore its impact on academic performance outcomes and develop strategies to ensure the quality and reliability of educational videos used by students.

LIMITATIONS

1. **Sample Size and Diversity:** The study included only 120 physiotherapy students from a limited number of institutions, which may not fully represent all student populations.
2. **Self-Reported Data:** Reliance on self-reported questionnaires may introduce bias, as participants could overestimate or underestimate their YouTube usage and dependency.
3. **Content Quality Variability:** The study did not assess the quality, accuracy, or reliability of YouTube videos used, which could affect the perceived benefits.
4. **Cross-Sectional Design:** Being cross-sectional, the study only captures a snapshot in time, limiting the ability to infer long-term effects of YouTube usage on learning outcomes.

5. **Focus on Quantitative Data:** The study primarily collected quantitative data, without detailed qualitative insights into students' learning experiences and challenges.

FUTURE SCOPE

1. **Expanded Sample:** Future studies could include a larger and more diverse population across multiple institutions to improve generalizability.
2. **Qualitative Analysis:** Incorporating interviews or focus groups could provide deeper insights into how students use YouTube for learning and skill development.
3. **Content Quality Assessment:** Research can evaluate the credibility and accuracy of the videos students rely on, linking content quality to learning outcomes.
4. **Longitudinal Studies:** Long-term studies could examine how consistent YouTube usage impacts academic performance, clinical skills, and professional competency over time.
5. **Integration with Curriculum:** Future research could explore strategies to integrate YouTube and other digital resources with formal physiotherapy education for blended learning models.
6. **Comparative Studies:** Studies could compare YouTube-based learning with traditional methods to identify the most effective approaches for practical skill acquisition and theoretical understanding.

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ANNEXURE 1

CONSENT FORM

Please take a moment to read our informed consent before you proceed to complete the form. We thank you for your support on helping us conduct this clinical research study.

PROJECT TITLE

The Impact of YouTube as an Educational Resource for Physiotherapy Students Dependency and Perceived Benefits.

INTRODUCTION

You have been invited to participate in this online survey. It is important that you read this description of this survey and understand the role in it. Please give me your consent to participate in this clinical research study only if you have understood the need.

PURPOSE OF THE STUDY

To study the dependency and benefits of youtube amongs physiotherapy students.

DURATION OF THE STUDY AND NUMBER OF PARTICIPANTS

Duration of study was of 6 months and there was approximately 120 participants.

Study procedure to be followed

If you agree to participate in this study you will undergo

- Basic demographic data like age, gender
- A questionnaire which depends on dependency, challenges, benefits and performance impact of youtube.
- The questionnaire which was given and validated by the expert and advice from concern individual was taken.

Risk and discomfort

This study is completely safe and no harm will come to anyone. The time required may cause some minor

discomfort.Possible benefit of the study

By participating in the study , you will be able to get to know how much is your performance in academics and practical skills and your opinion on its feasibility in clinical practice , however there is no guarantee that you will get direct health benefit in this study . your participation will give you information about the impact of performance by youtube usage in skill acquisition of physiotherapy students.

Compensation for the participation:

Participation in the study will be at no cost .No compensation will be provided for the participation.

Right to withdraw from study:

Participation in this study is entirely voluntary. You may choose not to take part or may leave the study at any time.

Confidentiality:

All the study records will be kept confidential at all time. Your identity will not be revealed except as required by law. The result of your assessment may be published for scientific reasons. Your identity will not be revealed in this publication.

Thank you for taking the time to read (or have read to you) the information about this study. Before you sign this document, you should ask questions about anything you do not understand. This study staff will answer all your questions before, during and after the study. If you have any questions about this study or how it is being run or possible research related injury you can contact your study doctor.

1. Mayuri Dhawane

(Student of TMV'S Jayantrao Tilak College of Physiotherapy)

2. Dr. Chandra Iyer (PT)

If you have any questions about your rights as research participant or complaint regarding the research study you should call the member of institutional ethical committee on the following number on working days. Tel no. 020 24403031 (Monday-Friday 9am-4 pm: Saturday 9am- 1pm.)

Patient Consent

1. I have read or have had read to me the information given in the informed consent document for this study entitled **“The Impact of YouTube as an Educational Resource for Physiotherapy Students : Dependency and Perceived Benefits.”**
2. I have received an explanation of nature, purpose duration and foreseeable risk of trial and what I will be expected to do so. My questions have been answered satisfactorily.
3. I understand that my participation in this trial is voluntarily and that may refuse to participate or withdraw from the trial at any time; without penalty or loss of benefits to which I am otherwise entitled.
4. I further understand that any information that becomes available during the course of the study may affect my willingness to take part in the study will be informed to me.
5. Institutional review board authorities may wish to examine my medical records to verify the information collected. By signing this document I give permission for this review of records.
6. I understand that my identity will not be revealed in any report or publication.
7. I agree to take part in the above study.

Name of the research participant	Signature/Thumb impression	Date
Name of the impartial witness	Signature	Date
Name of the person administering consent	Signature	Date

ANNEXURE 2 :- DATA COLLECTION

Demographic Information

1. What is your age?
 - 18-22
 - 23-27
 - 28-32
 - 33+
2. What is your gender?
 - Male
 - Female
 - Other
3. Which academic year are you currently in?
 - 1st year UG
 - 2nd year UG
 - 3rd year UG
 - Postgraduate
4. How long have you been using YouTube for educational purposes?
 - Less than 6 months
 - 6 months to 1 year
 - 1-2 years
 - More than 2 years
5. How often do you use YouTube for educational purposes?
 - Daily
 - Several times a week
 - Weekly
 - Occasionally
6. On average, how many hours do you spend on YouTube per day for educational purposes?
 - Less than 1 hour
 - 1-2 hours
 - 2-3 hours

- More than 3 hours

7. What type of content do you mostly watch on YouTube? (Select all that apply)

- Practical demonstrations (e.g., therapeutic techniques)
- Theory-based lectures
- Anatomy tutorials
- Exam preparation
- Other (please specify): _____

Dependency on YouTube

8. On a scale of 1-5, how reliant are you on YouTube compared to traditional academic resources (like textbooks, lectures)?

- 1 (Not at all reliant)
- 2
- 3
- 4
- 5 (Very reliant)

9. Which resource do you prefer more for learning practical skills?

- YouTube
- In-person lectures
- Textbooks
- Peer-reviewed journals

10. What is your primary reason for using YouTube?

- Quick access to tutorials
- Visual learning
- Self-paced study
- Supplement to class lectures

Perceived Benefits

11. Has using YouTube improved your understanding of complex concepts?

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

12. How confident do you feel in performing practical skills after watching YouTube tutorials?

- 1 (Not confident at all)
- 2
- 3
- 4
- 5 (Very confident)

13. Have you noticed an improvement in your exam performance due to YouTube content?

- Yes
- No
- Somewhat

14. How frequently are you able to apply the techniques you learn from YouTube in real-life scenarios?

- Always
- Often
- Sometimes
- Rarely
- Never

15. How often do you question the credibility of the content you watch on YouTube? - Always

- Often
- Sometimes
- Rarely



- Never

16. How often do you find yourself distracted by non-educational content while using YouTube for learning?

- Always

- Often

- Sometimes

- Rarely

- Never

17. How frequently do you verify the information from YouTube using peer-reviewed resources?

- Always

- Often

- Sometimes

- Rarely

- Never

18. Has using YouTube reduced your usage of traditional academic resources (e.g., textbooks, research articles)?

- Strongly agree

- Agree

- Neutral

- Disagree

- Strongly disagree

Impact on Performance

19. How much do you believe your practical skills have improved due to YouTube content?

- 1 (Not improved)

- 2

- 3

- 4

- 5 (Greatly improved)

20. Have you noticed a change in your academic grades since you started using YouTube?

- Significant improvement
- Moderate improvement
- No change
- Decline

21. How has YouTube affected your overall approach to learning (e.g., study habits, focus)?

- Positively
- Neutral
- Negatively

