

Comparison of Physiotherapy and Management Students' Perception Towards Online Examination Introduced During Covid- 19 Pandemic

Dr. Shweta S. Devare Phadke¹, Dr.Sabina S. Kazi Hakim², Dr. Meera Deshmukh³, Dr. Pranati Tilak⁴

¹Professor and Principal, TMV's Lokmanya Medical College of Physiotherapy, Kharghar, Navi Mumbai.

²Assistant Professor, TMV's Lokmanya Medical College of Physiotherapy, Kharghar, Navi Mumbai.

³Management Department, Tilak Maharashtra Vidyapeeth, Pune

⁴Campus Director, Kharghar Campus, Tilak Maharashtra Vidyapeeth, Pune, Maharashtra.India.

Abstract - This study aims to compare perspectives of Students in two different field on the advantages and disadvantages of online exam taken during Covid -19 pandemic. Students view on ways to improve future conduction of online exams was explored. Overall satisfaction and adaptation level of current online exam was tested with the help of self made questionnaire. Questionnaire was tested for reliability using Cronbach's alpha. Purposive sampling was employed to ensure maximum participation. 429 physiotherapy and management students were responded for study. Management students in study population were friendlier with online pattern. All students ready for adoptability of online format in the future. Analysis of physiotherapy students emphasis on technology adaptation in day to day teaching learning process. This study stress a platform for interactive practical demonstration needs to be explored for future use. Technology driven curriculum changes will make all stakeholders of education sector 'Atmanirbhar' (self reliant - Make in INDIA policy) for future pandemic like situations.

Key Words: online exam, education, assessment, technology etc.

1. INTRODUCTION

This Covid - 19 pandemic, is a unique and special situation. It has introduced many new normal. Even the field of Education was not spared. In fact as a teacher we feel education field became more evolved. To state a few changes came into play in this pandemic are the introduction of technology in teaching as well as in assessment. This technology introduction was the need of an hour and it is here to stay. Future increase use of technology demands advancement of systems. This research paper is the part of bigger project which is designed to assess the effect of rapid introduction of technology in education field during Covid -19 pandemic.

Physiotherapy is speedily developing field, but this is more in clinical side. Whereas teaching, learning and assessing is still preferred in the traditional way. Covid -19 pandemic demanded change. In this smaller time frame more technology use got introduced in teaching, learning and assessing.

Field of business administration studies, more popularly known as management graduation are more technology friendly. Thus this study was designed to compare students of two different field for their perception towards online examination introduced during Covid- 19 pandemic.

Online examination is conducting a test online to measure the knowledge of the students on a given topic. Prior to covid 19 pandemic, everybody had to gather in a classroom at the same time to take an exam. With online examination students can take the exam online, with their own device, regardless of where they live. You only need a browser and an internet connection.

This kind of research would give detailed information about which parts of the online assessment systems are vital and which parts of the systems should be developed or revised to accomplish future wide acceptance.

1.1 Aim

To compare Physiotherapy and Management students' perception towards online examination introduced during Covid- 19 pandemic.

1.2 Objectives of the study

1. To compare the students' perception towards online examinations in management and physiotherapy field.
2. To compare the Satisfaction Level of the Current Online Examination in management and physiotherapy field.
3. To identify measures to achieve better version of online examination for future use.

2. Methodology

A Descriptive study was planned to gather student's perception. For research primary data was generated through Google forms. The convenient sampling method has been used to collect the Primary data. Form links were circulated among the student population who had just completed online examination during Covid -19 pandemic, at the Physiotherapy and Management colleges of Tilak Maharashtra Vidyapeeth. Students ready to participate for the study filled the forms anonymously. Responses were collected and analyzed with comparison of mean and percentage value.

Reliability

Reliability refers to the consistency of responses over time. In order to assess the reliability of this questionnaire, a pilot study was undertaken with five students randomly chosen from the population. Cronbach's alpha coefficient was calculated for questions with Likert scale in a survey/questionnaire, from this pilot study. Next, Cronbach's alpha coefficients were also assessed for the actual study responses.

Table1. - Reliability statistics

| Cronbach's Alpha | Physiotherapy | Management |
|------------------|---------------|------------|
| | 0.85 | 0.86 |

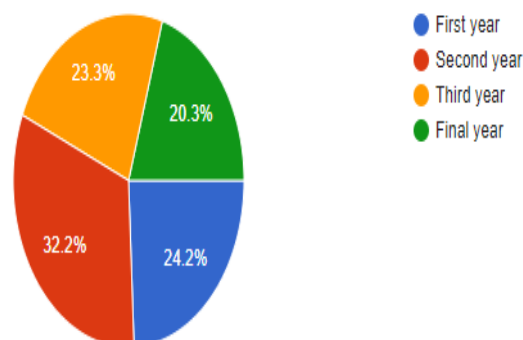
All items are responded to on a Likert scale of 1-5, where 5 = Strongly agree and 1 = Strongly disagree. Where effort was concern Likert scale of 1-5, where 5= Very High and 1 = Very Low. We can infer from the resulting scores as seen in table no. 1, questionnaire was reliable and dependable on response gathered for analysis. Thus the reliability level of this research was consistently high. Data from the open-ended responses were used for qualitative analysis.

Data analysis -

Total of 429 responses were collected including Physiotherapy and management students who had experienced traditional paper pen method in past as well as online assessment during Covid-19 pandemic.

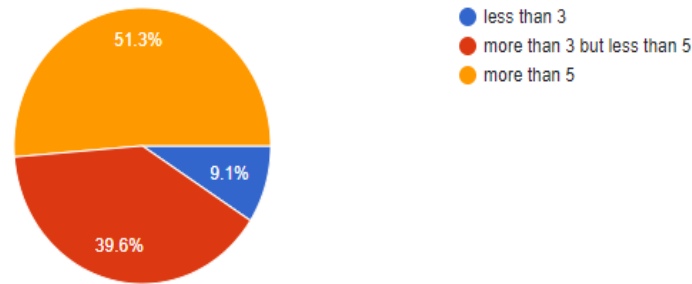
Demographic details

Chart - 1 Academic year of students in respected field.



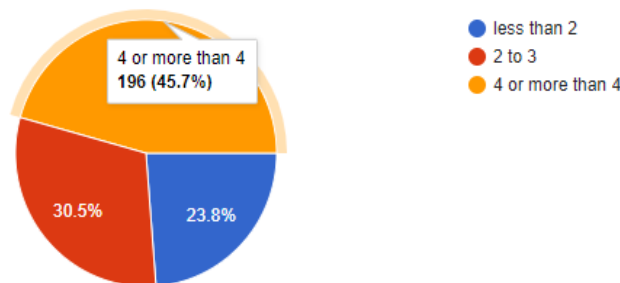
Maximum respondents from second year, thus have better familiarity of overall system in particular field.

Chart- 2 Theory subjects attempted in Online exam format.



Majority of respondents have given more than 3 theory subjects in online exam format. Thus experience of this format is liable.

Chart – 3 Practical subjects attempted in Online exam format.



Majority of respondents are well experienced for Practical exam in online format.

Table 2. Students’ perception of efforts

| Effort Requirement | Physiotherapy | | Management | |
|--------------------|---------------|-------|------------|-------|
| | Mean | SD | Mean | SD |
| Exam Preparation | 3.64 | ±0.75 | 3.64 | ±0.78 |
| Actual Exam | 4.07 | ±0.77 | 3.66 | ±0.81 |

Likert scale of 1-5, where 5 = Very High and 1 = Very Low. For Physiotherapy students, Actual exam was more effortful.

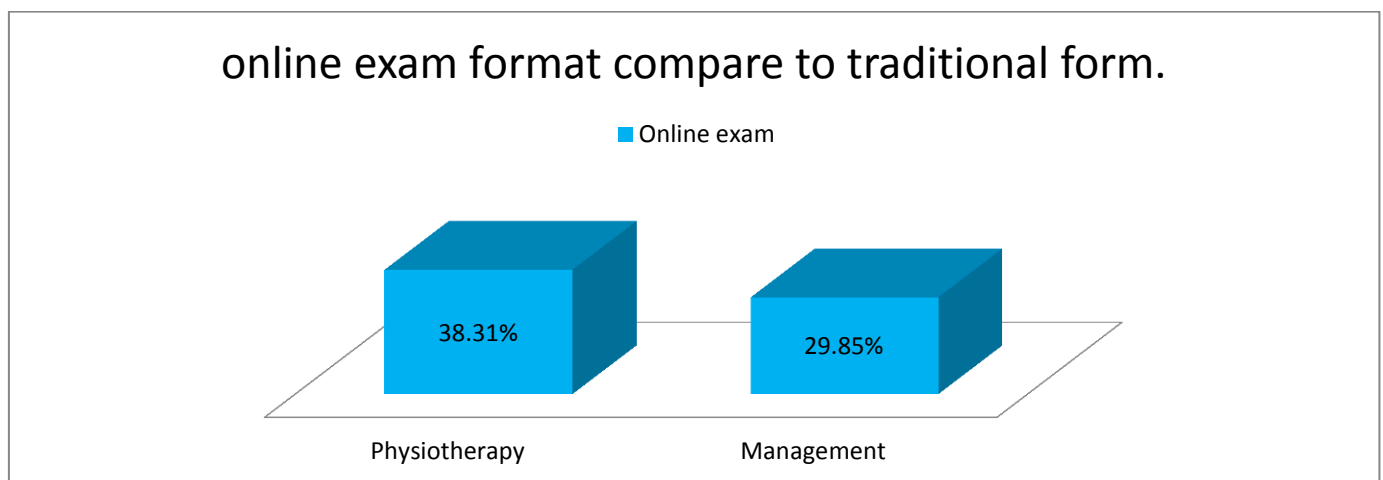
Table 3. Students’ perception of online exam plan and execution.

| Questions | Physiotherapy | | Management | |
|---|---------------|------|------------|-----|
| | Mean | SD | Mean | SD |
| Scheme of examination was clear and organized | 3.79 | 0.94 | 3.35 | 0.9 |
| Instructions were clear and easy to follow | 3.9 | 0.92 | 3.4 | 1 |

| | | | | |
|---|------|------|------|------|
| Examiner was available and helpful | 3.83 | 0.96 | 3.43 | 1.13 |
| Grading was prompt and had useful feedback given after exam | 3.51 | 0.99 | 3.28 | 0.98 |
| Exam objectives were clear | 3.77 | 0.87 | 3.35 | 0.82 |
| Exam workload was appropriate | 3.34 | 0.94 | 3.17 | 0.93 |
| Exam organization allowed students to participate effectively | 3.85 | 0.94 | 3.46 | 0.94 |

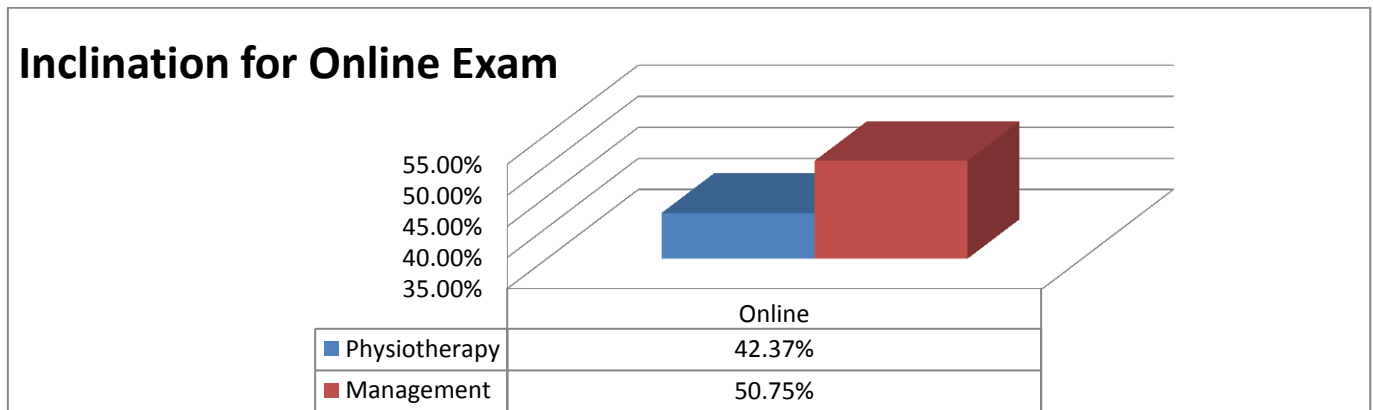
A Likert scale of 1-5, where 5 = Strongly agree and 1 = Strongly disagree. Physiotherapy students consistently given high score on good planning and execution of online exam.

Chart - 4 Perception of exertion in online exam format compare to traditional form.



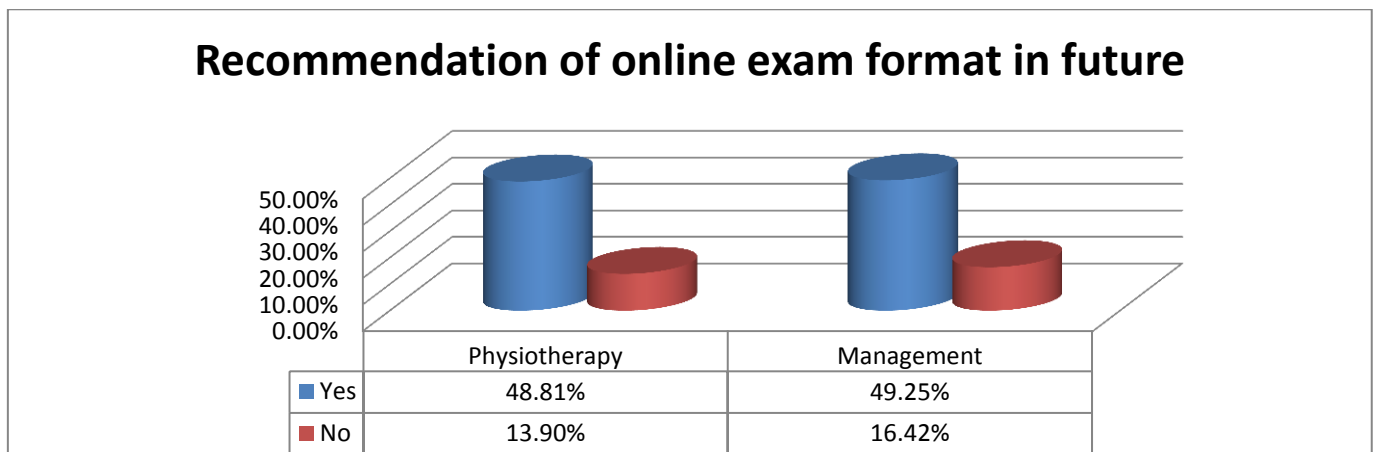
Compare to Management students Physiotherapy students perceived more exertion in online exam format. This indicates opportunity in Physiotherapy curriculum revision to adopt technology use in internal exams.

Chart – 5 Inclination for online exam.



Management students are more inclined towards online exam format.

Chart -6 Recommendation of online exam format in future.



Majority of students in both groups are ready to adopt online format in future.

3. Discussion

This research which is actually the part of a project, aims to study Covid-19 pandemic effect on different stake holders of education sector. This particular paper compares view of students from two different streams i.e. management and physiotherapy. Management stream is hypothesized to be more tech savvy; on other hand Physiotherapy students are more familiar with human body than technology. Review of literature had shown that management stream use technology more frequently in day to day teaching and learning. Physiotherapy teaching and learning is still more patient oriented and traditional.

Thus we tried to study perception of online exam format on these diverse groups of students. This will help us to eliminate bias on technology friendliness among students. Results discussed here are only for online exam adopted during Covid- 19 pandemic situation. Authors wanted to analyze students view as well as give suggestion to help future reforms in educational field.

Statistical analyses represented in table 1, infer that questionnaire was designed carefully and had high reliability. Validity and reliability are two fundamental elements in the evaluation of a measurement instrument. [1] Validity is concerned with the extent to which an instrument measures what it is intended to measure. Reliability is concerned with the ability of an instrument to measure consistently. [2] It should be noted that the reliability of an instrument is closely associated with its validity. An instrument cannot be valid unless it is reliable. [3]

In near future this reliable questionnaire can be adapted to study other diverse group of students; analysis of larger population will help to reform the process in the education field post Covid -19.

Study populations demographic characteristics are unique and make it homogenous. Chart 1, illustrate Academic year of students, maximum students are second year onwards which confirms that respondent had rich experience of traditional exam pattern in particular field.

Chart 2 and 3 demonstrate theory and practical attempted in online exam format during Covid-19 pandemic Majority of respondents attempted more than 3 exams make them eligible to provide feedback.

As seen in table 2, Physiotherapy students perceived more efforts while giving exam in online format, this suggests that medical students need more technology exposure in day to day learning process. Author as a teacher in physiotherapy field for more than 12 years experienced resistance on this part by different factors. Past completed studies using online social networking platform for clinical related application had shown promising results.[4,5] But study population was limited and sustained resistance during data collection.

Covid- 19 pandemic gave out a loud message “adaptation of technology in day to day teaching learning process is need of an hour”. Many interactive platforms like video conferencing; Google classroom etc. can be effectively adopted and will prepare education field stakeholders during future pandemic situations. Table 3, concludes compliment for the teachers as on such short notice they planned and executed online exam format which was well received by students. Previous studies in this regard reported the effectiveness of the online assessment system. They also thought that there is much room for improvement in online assessment systems in the near future. But still such systems are acceptable to computer-friendly youth.[6]

For future sustenance, on large scale advance technical support and revised model of online exam is necessary. Author feels India is in need of a platform for conduction of exam for large population which will have low prerequisite of internet and gadgets.

Chart 4 shows, compared to Management students Physiotherapy students perceived more exertion in online exam format. This indicates need of Physiotherapy curriculum revision to include technology use in internal assessment.

Chart 5 represents management student’s inclination towards online exam format. This makes it obvious that there is need of curriculum revision for physiotherapy students to make them more proficient with technology.

Effectiveness of Digitized Administration and the significance of Artificial Intelligence also studied through case study by one of the author which concluded that Artificial Intelligence is an essential modern technology and Higher Education Sector needs to adopt the same to compete in the world. [7]

When asked for future recommendation about online exam as seen in Chart 6 most students in both groups were ready to adopt online exam format in future. International survey about student’s experiences with both exams pattern indicated that they prefer certain aspects of online exams such as automatic results and feedback.[8] Study in Manipal University concluded that university should carefully design its online examination strategy eliminating all such problems and reap the benefits of the technology and the students need simultaneously.[9]

4. Conclusion

When compared diverse fields students’ perception towards online examination introduced during Covid- 19 pandemic, all showed positive attitude towards technology. Results analysis from physiotherapy students shows evidence and need towards curriculum redesign in the form of introduction of technology in day to day teaching learning process. Universities need to explore and adopt platforms which will help in the conduction of exam for large population of students with low dependability on internet and gadgets.

ACKNOWLEDGEMENT

The authors thank all the participating students for giving their consent and participate in the study. We will like to acknowledge **Honorable Dr. Deepak Tilak**, President, Tilak Maharashtra Vidyapeeth, Pune for his encouragement and positive support. As this article was written during lock down period my ten year old son **Master Swar Satish Phadke**, needs special mention, for his help in graph and table design. Authors acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to

authors/editors/publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

REFERENCES

- [1] Mohsen Tavakol, Reg Dennick, Making sense of Cronbach's alpha;International Journal of Medical Education, 2011; 2:53-55
- [2] Kore Tejaswini et al. Survey on Online Examination system, Research J. Science and Tech. 7(2): April-June, 2015; Page 118-120,DOI: 10.5958/2349-2988.2015.00015.7
- [3] Tavakol M, Mohagheghi MA, Dennick R. Assessing the skills of surgical residents using simulation. J Surg Educ. 2008;65(2):77-83.
- [4] Grover, Pranjal & Trupti S.Kulkarni Deshmukh, & Shweta Devare Phadke,. (2019). Efficacy of online social networking (OSN) in creating awareness about cervical and shoulder related musculoskeletal problems among sedentary middle aged women. International Journal of Current Advanced Research. 8. 19185-19188. 10.24327/ijcar.2019.19188.3690.
- [5] Trupti S.Kulkarni Deshmukh, & Pooja, Agarwala & Devare Phadke Shweta. (2020). Factors Affecting Specific Rehabilitation in Follow-Up of Patients Coming to Outpatient Physiotherapy Department: An Online Social Networking (OSN) Survey. Scholars Journal of Applied Medical Sciences. May 2020,8(5) 1290-1294,08. 10.36347/sjams.2020.v08i05.024.
- [6] M. Yasar Özden, Ismail Ertürk, and Refik Sanli, Students' Perceptions of Online Assessment: A Case Study, JOURNAL OF DISTANCE EDUCATION, SPRING/PRINTEMPS 2004 ,VOL. 19, No 2, 77-92
- [7] Dr. Pranati Tilak, Dr. Shrirang Kandalgaonkar , Mrs. Vrushali Raut , Issues and Challenges in Administration of Higher Education due to COVID 19: A step ahead from Paperless office to Humanless office Mukht Shabd Journal Volume IX, Issue VII, 422-431,JULY/2020 ISSN NO : 2347-3150
- [8] Majdi Al-Qdah and Islam Ababneh, Comparing Online and Paper Exams: Performances and Perceptions of Saudi Students, *International Journal of Information and Education Technology*, Vol. 7, No. 2, February 2017,106-110.
- [9] Dr. Umesh Maiya,Mr. Shivaprasad K, Students' perception towards online examinations of university, International Journal of Business and Administration Research Review. Vol.I, Issue No.2, Nov-Jan2014,10-17.

BIOGRAPHIES



Fortunate to start in a Institute's first ever university affiliated college. This gave me unique knowledge enriching learning experience of balancing in dynamic environment. My teaching philosophy is to nurture an environment that promotes 1. Enthusiasm, 2. Life -long learning, 3. Connection to real world,4. Teacher and student accountability, and 5. Confidence building.