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### The Impact of COVID-19 Pandemic on the Academic Performance of Post Graduate Veterinary Students in India

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1 Comment

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#### Abstract

*Covid-19 pandemic has interrupted learning and presented serious challenges for veterinary education like other streams of education. The present study aimed to explore the impact of COVID-19 Lockdown on the academic performance of veterinary postgraduate students. A descriptive survey was carried out using an online Google form questionnaire. A total of 64 participants from 5 different colleges from Maharashtra, India have taken part in the survey. The results indicated that COVID-19 Pandemic Lockdown affected the teaching quality; students' learning and ultimately it affected academic performance. Study also found that: Online mode helps to continue education with an opportunity for self-study; delivery of practical lessons was a major challenge; it is difficult to study PG 4th semester*



*status, mental stress, internet connectivity & speed; low bandwidth etc. along with this educational loss of the entire academic year was incurred. In conclusion, the paper suggests some recommendations for the way forward.*

**Keywords:** Veterinary students, Covid-19, online teaching, academic performance

## Introduction

In the current global crisis of Covid-19 pandemic, we Post Graduate Veterinary students and our faced formidable challenges, which we cannot explain in words. We couldn't understood whether to continue our 4th semester or not, the need to help live stocks and pets, dealing with rapid technological changes and research variables that affect our mental health. Universities and colleges worldwide have been closed, and online education has suddenly become an academic norm. The global pandemic, COVID-19, forced a drastic change in the collegiate experience for students and instructors (Schee & Birrittella, 2021). The only alternative; online education was accepted all over the world which has many challenges. Veterinary education is also confronted with the same. Although online education provides an opportunity for self-study, the main challenge faced in veterinary education is how to give practical lessons (Mhady, 2020). As a part of Veterinary education, students have to visit various labs and locations which were not feasible during Lockdown due to restrictions on travelling which hampered their practical knowledge. The teachers lacked the skills of conducting online education. Practicing veterinarians faced problems with reaching their patients due to travel restrictions, unavailability of medicines and feedstock, also lack of transports caused pharmacy to get empty sooner. As there are no studies investigating the effect of COVID-19 on difficulties faced by veterinary PG students, the current study was conducted to analyze the impact of COVID-19 pandemic on the academic performance of veterinary students and the difficulties faced by them. According to Rajab et al. (2020) pandemics have historically created challenges, identifying these challenges is the first step in converting them into opportunities.

## Literature Review

Covid-19 pandemic made us jump from offline to online without prior readiness. External events can cause a drastic change in the environment that necessitates quick transitions (Schee & Birrittella, 2021). To respond to the current challenges of pandemic many educational institutions adapted digital platforms to replace traditional ways of teaching. Education sector, which was reluctant to use technology, continued online teaching. According to Muthuprasad, et al. (2021) online learning is a perfect substitute for the traditional classroom learning if they are designed suitably. But the main challenge with online learning is practical aspects which cannot be effectively delivered (Christian, 2021; Dobbs-Oates, 2021) as most of the subjects are practical. Some other challenges are students do not have access to laptops, or high-speed internet at home (Rajab et al., 2020). Challenges as identified by Pokhrel & Chhetri, (2021) are accessibility, and affordability for all learners of varied economic backgrounds. Thus, pandemic also interrupted the internship programme where the student gets the actual field based experiences. Dobbs-Oates et al. (2021) stated the importance of field experience as it



grapple with a wide range of issues to ensure that students can be trained and assessed appropriately. Thus, Covid-19 pandemic have caused unprecedented and unexpected challenges for veterinary schools Routh et al. (2021). According to Melo, et al. (2020) the pandemic has negatively affected teaching quality and student learning at most universities and colleges.

The literature has highlighted different studies conducted during pandemic; very few studies have attempted to understand the impact of pandemic on the academic performance of veterinary students. To the best of our knowledge no study attempted to understand difficulties and impact of pandemic on the performance of veterinary students in Indian context. Thus to fill this gap, drawing insights from the literature in conceptualizing the problem, exclusively focusing attention on difficulties and impact of pandemic on the academic performance of Indian students in veterinary education.

The current study synthesizes the descriptive research regarding the impact of COVID-19 pandemic on the academic performance of post graduate veterinary students. The academic performance of veterinary Post Graduate Veterinary students means the intellectual level, personality, motivation, skills, interests, study habits, self-esteem or the teacher-student relationship in of veterinary education at post graduate level. This academic success is important because as a veterinarian we have to tackle with animals and it needs higher levels of skills, positive self-esteem and self-confidence. Following two research questions are addressed based on the responses collected from descriptive survey:

**RQ. 1** How has the Covid-19 pandemic affected veterinary education?

**RQ. 2** What is the effect of COVID-19 lockdown on the academic performance of veterinary Post Graduate Veterinary students in India?

## **Methodology**

A descriptive survey method was used to analyze the difficulties faced by the veterinary students during COVID-19 Lockdown and its impact on the academic performance. As described by Mathiyazhagan & Nandan (2010) survey research method is a descriptive research method used for the collection of data from the representative sample of the target population.

## **Questionnaire Design**

A Google form was designed to collect the data from Veterinary students. The form clearly ensured the purpose of data collection by keeping the participants anonymity. It evaluated the effect of COVID-19 pandemic on the performance of Veterinary students in online learning during the Lockdown. The questionnaire consisted of 8 questions (2 closed-ended and 6 open-ended). For designing closed ended Likert scale was used, the first question was based on the evaluation of the effect of Lockdown on academic performance and the second one for the evaluation of online practical learning. 6 open ended questions were designed to evaluate General problem, Difficulties, Field problems, Effect on Mental health, and Use of Online Learning and Online Learning Opportunities.

## **Sample and Data collection**



Data collection was done using a spreadsheet linked to the online Google form questionnaire.

### Data analysis

Descriptive statistics were presented as counts and percentages to summarize the collected data as suggested by (Mahdy, 2020). To measure the effect of COVID-19 Lockdown on the academic performance and perspective on online practicals of veterinary medical students, 5-Point Likert Scale was used. Answers were converted into numeric values as follows (greatly affected = 5 points; considerably affected = 4 points; moderately affected = 3 points; slightly affected = 2 points; Not affected = 1 point).

To analyse the data collected from the survey, manual thematic analysis of the data was done. Question wise documents were prepared and a query was run to explore the word frequency. Open coding from the acquired data was done at an initial stage and themes and sub-themes were formed. The analysis is based on Bhamani (2020) suggestions which affirm that the codes, themes and sub-themes verified by all researchers confirm coherence in interpretation.

### Results

A total of 64 participants responded to the survey. Findings from the analysis and data gathered from this study are presented below.

**1. General problem faced by veterinary students during COVID-19 Pandemic Lockdown** Due to various challenges of online learning students' lost their interest in learning (78%). 26% of students faced the internet issues as they shifted to their hometown in rural areas, 14% of students faced financial crises, and were unable to buy electronic gadgets required for e-learning .

**2. Difficulties faced by veterinary students during COVID-19 Pandemic Lockdown In Research project** PG students of semester 4th have encountered many challenges. The research study which is of six months duration as per their coursework, was required to wind up within 3 months, they had to limit their research objectives (81%) and have to change their topic of research (67%) as per the prevailing conditions. The researcher had to face challenges of unavailability of product stock (53%) which was needed for their study due to transport supply restriction. In addition to this, rumors such as bird flu (37%) also contributed to delay in start of project causing mental stress.

**3. Field problem faced by veterinary students during COVID-19 Pandemic Lockdown** Due to travelling restrictions students were unable to visit the field, which hampered first-hand experience, the clinical practice was disrupted and the medicine stock soon emptied due to supply problem.

**4. Effect on Mental health of veterinary students due to COVID-19 Pandemic Lockdown** Veterinary students' faced the loss of almost one whole academic year (94 %). Students lack of online information about certain subjects (56%). Students have to spend more time (67%) finding the appropriate content related to the topic. Restriction on knowledge in the clinical setting (24%). PG 4th semester Veterinary students had to cut short their research objectives and change their research topics. Such conditions also had an adverse effect on their mental health.

**5. Online Learning Opportunities** The opportunities which students mentioned, they can access the

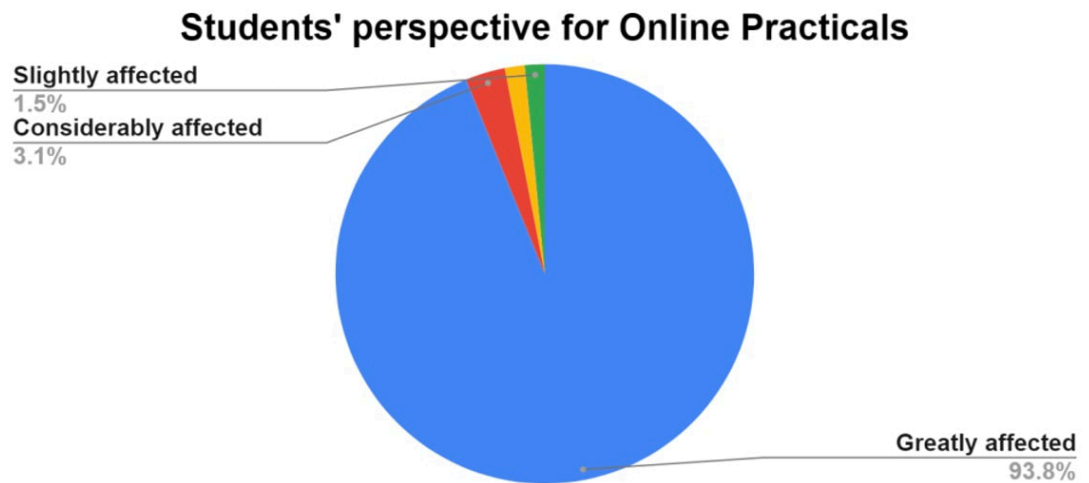


self-study.

**6. Online Learning** 56% of students found online learning more convenient & flexible as it gives the opportunity to engage in an area of one's interest (59%).

**7. Evaluation of Students' perspective on online practicals during COVID-19 pandemic lockdown**

The mean evaluation score was 4.96 points. The data showed that maximum students (93.8%) were greatly affected whereas 3.1% considerably and moderately affected and 1.5% of students were slightly affected. (Figure 1).



**Figure 1**

8. The students' perception about Academic Performance due to COVID-19 Pandemic Lockdown The mean evaluation score was 4.77 points. The data showed that maximum participants (87.5%) were greatly affected whereas 6.3% were considerably affected, 3.1% moderately and slightly affected, whereas, only 1.6% of participants reported that Lockdown had no effect on their academic performance (Figure 2).

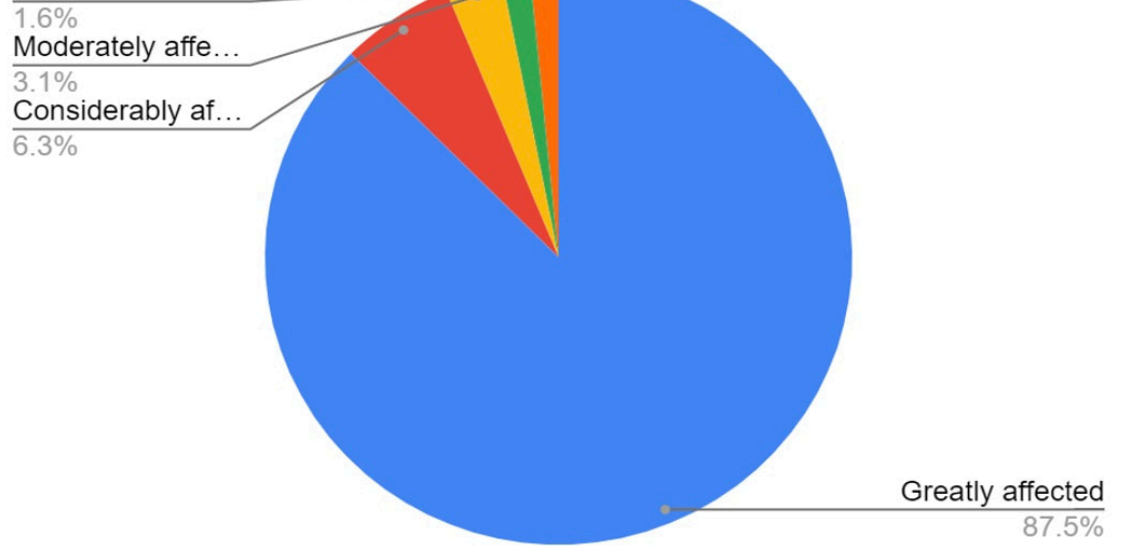


Figure 2



Sl. No.	Themes	Issues	Responses (%)
1	General problem faced by veterinary students during COVID-19 Pandemic Lockdown	Loss of interest	78%
		The availability of internet in provincial and rural areas	26%
		The availability of learning devices to access the internet and view the online materials	14%
2	Difficulties faced by veterinary 4th semester PG students during COVID-19 Pandemic Lockdown in research project	Changes in research topics	67%.
		Limited objectives and parameters	81%.
		Unavailability of product stock	53%
		Rumors	37%
3	Field problem faced by veterinary students during COVID-19 Pandemic Lockdown	Transport restriction	76%
		Research parameters and selling	88%
4	Effect on Mental health of veterinary students due to COVID-19 Pandemic Lockdown	One year lost	94%
		Spending long time in online learning	67%
		Lack of application in the clinical setting	24%
		Lack of online information about certain subjects	56%
5	Online Learning Opportunities	Online lectures in PPT, pdf, and 3D animation	69%.
		Practical learning using videos	50%
		An opportunity for self-study	71%
6	Online Learning	More convenient & flexible	56%
		Other activities	59%

## Discussion

COVID-19 situation presented serious challenges for veterinary students. Traditional teaching consisting of hands-on practical had to stop abruptly, which was forcibly replaced with online teaching. The study was carried out to analyze the impact of COVID-19 Lockdown on the academic performance of veterinary postgraduate students. The various challenges of online education have intensified the burden of veterinary education during Covid-19.



As veterinary education is an activity oriented field based course it requires maximum hands-on experiences. While Pandemic students were shifted to e-learning, which was only beneficial for theoretical subjects, lack of hands-on practice caused huge loss in students' understanding (93%). They were unable to apply their knowledge in clinical settings (24%).

The current data shows that COVID-19 Pandemic Lockdown caused a loss of almost one academic year (94%) and also affected the academic performance of most of the students (87.5%); this finding is reinforced by the studies of Melo, et al. (2020).

Lack of online information about certain subjects (56%), spending more time (67%) to find the appropriate content. Especially PG 4th semester Veterinary students had to compromise with field based experiences as most of their syllabus is based on practicals. They had to cut short their research objectives and change their research topic (67%) because of travel restrictions and lack of all facilities at one place. Students lose their interest due to various challenges of online learning (78%). During e-learning exams didn't make any sense causing students to take the study casually this all affected students' mental health. In addition students with higher socio-economic status were able to adapt faster to e-learning because of the availability of all electronic gadgets they owned but at the same time many students faced financial crises, they found it difficult to pay the fees of college moreover they were unable to buy virtual learning tools like laptops (14%). The students opined that flexibility and convenience of online classes makes it an attractive option, whereas broadband connectivity issues in rural areas is a challenge (26%). Along with this teachers were incompetent for using technology because of practical correlation of the subjects. As such they have to learn / upgrade their knowledge about e-learning. According to Rana & Kumar (2017) a teacher should be the initiator and has to proactively take responsibility for modification/addition to the contents of lecture dynamically in sync with the requirements of time. Whereas Muthuprasad et al., (2021) claimed that in future technical proficiency of teachers and learners related to usage of computer and internet will be a major factor determining the effectiveness of online classes.

Despite these challenges, the COVID-19 pandemic has had a positive impact on veterinary education. Some of the opportunities as reported were students can access the content of PPT, pdf, and 3D animations without restrictions of time and place (69%). As there was no alternative, they learned practicals by watching videos (50%) but they found actual field experiences are irreplaceable. 71% of students found online education gave them an opportunity for self-study. But at the same time many found it as a challenge as they had never taken the responsibility for their own learning. 56% students found online learning as more convenient & flexible which gives them the opportunity to indulge themselves in various activities of their interest (59%).

Covid-19 had a huge impact directly on veterinarians and indirectly on animals too. Most students are of the opinion that it is difficult to fulfill the veterinary competencies only with an online education system



This study highlights the difficulties faced by veterinary students due to online education and its challenges as a result of the sudden switch from traditional to online learning in veterinary education. The findings of this study indicated that veterinary students are confronted with many challenges due to COVID-19 Pandemic Lockdown. It affected the academic performance of most participants with varying degrees. Students did not attempt the exam seriously; Internet connectivity became the barrier (Muthuprasad et al., 2021). Students expressed concerns about hands-on practices which restricted their understanding. Covid-19 created the opportunity of self-study which is an alternative way to spoon-feeding. It paved the way for shifting teacher centered instruction towards a well scaffold, student-centered learning.

Finally, and importantly, the innovation and creativity that comes hand in hand with sudden and challenging obstacles will undoubtedly gift us with novel and exciting practices that we can continue to use once the dust has settled Routh et al. (2021). According to University World News (2021) and Brazier, R. (2021) the future for many institutions is likely to present a truly blended, non-binary – neither solely online nor on-campus – offering and now is therefore the perfect opportunity to develop a best-practice framework for the future.

### Recommendations

Through above discussion and conclusion the recommendation needed for this situation is to provide Teachers with training for using online education platforms (Dhawan, 2020). Veterinary practice can never be shifted fully to online mode as practical is a core medium therefore during Covid time with safety precaution and following measures a way to do practice has to be derived eg. small student group batch wise practical. Online education should be made interactive using various tools and virtual laboratories which can be an alternative field based experience for a blended approach.

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