



Research Paper

## After effect of online education (due to COVID 19) on pharmacy education

Ms. Payal Ahlawat, Ms. Preeti and Dr. Deepika Thareja

**Abstract:** This survey was conducted to assess the after-effects of online studies on Pharmacy education due to COVID 19. Main objective of the survey was to report various positive and negative after-effects of online classes with special reference to pharmacy education. The survey was conducted online from 10 April, 2022 to 10 June, 2022 through Google forms. The Google form was sent through Whatsapp and email to different pharmacy colleges and a total of 144 responses were collected to assess whether the technologically advanced approach of online education was actually worthwhile to the students. This survey also tried to know about the various types of problems faced by the students in attending online classes. The survey suggests that government should come up with some innovative way to include practicals in the online classes if any such scenario is repeated in future. We are in desperate need of strategies to improve pharmacy education to increase the employability and practical training through our curriculum.

**Keywords:** Covid-19, Pharmacy, after effects, online education

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### I. Introduction:

Coronavirus Disease-2019 (COVID-19) became a pandemic shortly after its global appearance in the early spring of 2020. It was quickly followed by a global blackout and the practice of social distancing.(1) All kinds of activities were disrupted in the worst conceivable way in this unique situation, which included day-to-day work and employment. Lockdown became a big and unexpected difficulty for everybody in the year 2020, particularly for those in charge of workplaces and educational institutions.(2) Immediate rules and methods were created to ensure that students could receive degrees and avoid delays. Following the government's announcement that education must continue uninterrupted, it was made mandatory.(3)As a result, digital learning arose and was quickly adopted by all institutes throughout the world to ensure that education was not interrupted. As a result, traditional on-campus classes gave way to e-classes. Students of all ages were influenced by this rapid evolution on such a vast scale.(4) However, in a short period of time, teachers all over the world were presenting virtual lectures to students who were participating over the internet. The online mode of the teaching-learning process is often discriminatory to poor and marginalized students. It is identified that hearing-impaired students face challenges in online learning. The closure of educational institutions during the lockdown hampered the education system and the teaching-learning process. In this crisis period, it is critical to understand the teaching-learning process in order to design effective interventions for the smooth operation of teaching and learning. The probable consequences of the COVID-19 epidemic on the lives of students were researched and analysed in this paper.

### II. Data And Methods:

#### 2.1 Subjects:

This research is based on an online survey of 144 Pharmacy students from Haryana colleges.

#### 2.2 Data collection and Procedure:

To gather the data, an online survey was performed from 10 April to 10 June, 2022. Students were emailed a link to a structured questionnaire created with Google Forms via WhatsApp and email. Before taking part in the online survey, participants were given the opportunity to give their full consent. A total of 144 students responded to the survey with complete information.

### 2.3 Data analysis:

To better understand the distribution of research participants, descriptive statistics were used. To assess the learning status, manner of learning, and perspective on educational issues, a simple percentage distribution was estimated. All the analysis was performed using Microsoft Excel 2010.

## III. Result and Discussion

### 3.1 Demographic details

The study of participants' profile is displayed in **Table 1**. Nearly 77.8% of the 144 students were under the age of 20-21. The number of male and female students were 101 and 43 respectively. The majority of them belong to rural areas (54.9%)

**Table 1**(characteristics of study participants) n =144

Characteristic	Frequency	Percentage
<b>1) Age of students</b>		
a) 17-19	32	22.2
b) 20-21	112	77.8
<b>2) Gender</b>		
a) Male	101	70.1
b) Female	43	29.9
<b>3) Residence</b>		
a) Urban	65	45.1
b) Rural	79	54.9
<b>4) Marital status</b>		
a) Married	15	10.4
b) Unmarried	129	89.6
<b>5) Level of education</b>		
a) D. Pharmacy	55	38.2
b) B. Pharmacy	89	61.8

### 3.2 Attitude regarding COVID 19 (Table 2)

What is the state of students' knowledge and attitudes towards the present public health crisis? Students (49.3%) learned about COVID-19 through social media i.e. TV and other students from Newspapers and word of mouth demonstrating their knowledge of various information concerning the disease. During the lockdown, they were able to stay in their own homes. The college students who were not living in their own homes (relatives' homes, rental houses, mess, and as a paying guests etc.) were all having problems like financial (62.5%), emotional (10.4 %), and social (27.1 %)

**Table 2** (Attitude regarding COVID-19)

Attitude	Frequency	Percentage
<b>1) Source of information</b>		
a) TV	71	49.3
b) Newspaper	31	21.5
c) Word of mouth	42	29.2
<b>2) Difficulty faced during Covid-19</b>		
a) social	39	27.1
b) Emotional	15	10.4
c) Financial	90	62.5
<b>3) Were you found Covid-19 positive</b>		
a) yes	126	87.5
b) no	18	12.5
<b>4) If yes, did your education suffered due to COVID(n=126)</b>		
a) Yes	83	66.4
b) No	43	33.6

### 3.3) Status of classes during lockdown (Table 3)

Several questions were asked to determine the learning state during the lockdown, including modes of learning, time spent on learning or have you attended online classes earlier. Out of 144 participants 117 students said that they were attending for the first time.

**Table 3(Status of classes during lockdown)**

Variable	Frequency	Percentage
1) <b>Mode of Learning</b>		
a) <b>Online classes</b>	45	31.3
b) <b>Self study</b>	24	16.7
c) <b>Both</b>	75	52.1
2) <b>Time spent on learning</b>		
a) <b>More than offline classes</b>	50	34.7
b) <b>less than offline classes</b>	48	33.3
c) <b>As much as offline classes</b>	46	31.9
3) <b>First time you attended online classes</b>	117	81.3
a) <b>yes</b>	27	18.8
b) <b>No</b>		

**3.4 ) Issues faced during online classes (Table 4)**

- a) Issues with Online Learning Adaptability
- b) Online Learning's Technical Issues
- c) Computer Knowledge Challenge in Online Learning
- d) Suitable environment at home
- e) Availability of suitable study material

**Table 4 (Issue faced during online classes)**

Variable	Frequency	Percentage
1) <b>Communication problem in class</b>		
a) <b>Yes</b>	102	70.8
b) <b>No</b>	42	29.2
2) <b>Avalabilty of sufficient study material</b>		
a) <b>Yes</b>	75	52.05
b) <b>No</b>	69	47.95
3) <b>Suitable Environment at home</b>		
a) <b>Yes</b>	73	50.7
b) <b>No</b>	71	49.3

**3.5) After effects of online education (Table5)**

When polled, the majority of students stated that the epidemic had "impacted at all levels" and that it was "harmful to their education." Students cited a variety of reasons for their dissatisfaction with features of remote learning, including "it takes longer to get through content" and "keeping track of coursework." Several students also mentioned that their home learning environment was "loud and disruptive," and that it was "not conducive to productivity." "Moving back home is not the ideal condition for studying because of poor internet connection and my family's inability to realise that I have to study and work," another student explained.

**Table 5 (After effect of online classes)**

Variable	Frequency	Percentage
1) <b>Satisfied from learning outcome of online classes:</b>		
a) <b>Yes</b>		
b) <b>No</b>	87	60.4
	57	39.6
2) <b>Do you think that the classes could be conducted in better way?</b>		
a) <b>Yes</b>		
b) <b>No</b>	111	77.1
	33	22.9
3) <b>Do you think that your practical knowledge suffered due to online education?</b>		
a) <b>Yes</b>	114	79.2
b) <b>No</b>	30	20.8
4) <b>If given an option what mode of class would you prefer?</b>		
a) <b>Online</b>		
b) <b>Offline</b>	46	31.9
	98	68.1

#### **IV. Conclusion:**

Finally, COVID-19 has generated worries about pharmacy education and other professions in general, as it has severely disturbed the overall learning process. Students in various fields have varied needs, but practical knowledge is just as important as theoretical for pharmacy students. Despite all efforts, a significant gap still exists, necessitating some initiative or policy to provide pharmacy students with hands-on clinical training, industrial exposure, hospital rounds, and retail residencies in order to instill the necessary level of confidence prior to entering professional practice. Despite all efforts made, a significant gap remains, on this online platform.

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