

## Original Research Article

# Attitude towards online classes among school and college going students during lockdown due to COVID-19 pandemic

Saurav Kumar, Shiv Prakash\*, Mona Srivastava

Department of Psychiatry, Institute of Medical Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

**Received:** 22 May 2021

**Accepted:** 16 June 2021

### \*Correspondence:

Mr. Shiv Prakash,

E-mail: [shiv.prakash15@bhu.ac.in](mailto:shiv.prakash15@bhu.ac.in)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** The aim of the study was to assess the attitude of the school and college-going students towards online classes.

**Methods:** An online cross-sectional study was conducted on 228 school and college-going students fulfilling inclusion and exclusion criteria selected through purposive sampling methods. A semi-structured online questionnaire consisting of a socio-demographic questionnaire and Attitude towards online classes (ATOC) questionnaire was prepared by the researcher using Google form. The link of the questionnaire was sent to all the selected respondents through WhatsApp messages and emails. The data was analyzed using the IBM SPSS version 20 software. The reliability of the attitude questionnaire was assessed using Cronbach's alpha test. The association between categorical variables was assessed using Chi-square tests. The comparison between variables was assessed using the students independent t-test.

**Results:** More than half of the respondents (51.32%) were found with a positive attitude towards online classes. There was a significant association found between attitude towards online classes and socio-demographic variables such as age ( $p < 0.05$ ), academic level ( $p < 0.05$ ), and family income ( $p < 0.01$ ). The respondents who attended online classes ( $p < 0.05$ ), have technical knowledge ( $p < 0.01$ ), and got supported by their parents in the study ( $p < 0.05$ ) were found significantly high positive attitudes towards online classes. There was a significant difference found in the attitude of the respondents who faced psychological disturbances such as a decline in attention-concentration ( $p < 0.05$ ), irritation-anger ( $p < 0.01$ ), and tension ( $p < 0.05$ ) due to online classes.

**Conclusions:** Although, online classes are more beneficial for the students and teachers in their academic activities during the lockdown period due to the COVID-19 pandemic but it can't take place of traditional face-to-face classes.

**Keywords:** COVID-19, Corona virus, Perception, E-learning, Face-to-face teaching

## INTRODUCTION

As it is seen that whole world has witnessed massive evolution both in development advancement and adoption rate for the digital technologies in daily human life. Every field is working with the help of technology and the education sector is one of these. With the COVID-19- a novel corona virus disease spreading across the globe, many countries have ordered the closure of all educational institutes. Educational institutions decided to halt their functioning as they had to protect their students from viral exposures, which are likely in a highly socializing student community. As the schools and colleges are shut for an

indefinite period, many challenges are faced by teachers and students suddenly.

At this time online education appeared as an alternative method to impart education with minimum social contact. The word 'online learning' refers to a wide range of pedagogical resources and methods that are constantly evolving to meet the needs of students and teachers.

Web content has enriched day by day and becomes more interactive for users as global connectivity and internet access speeds have increased.<sup>1</sup> Students can effectively communicate with others using online learning systems

because they offer an alternative, more versatile mode of communication.<sup>2</sup>

Online learning systems have three key goals: improving access to education and training, improving the quality of teaching and learning, and allowing higher education institutions to keep a competitive edge in an evolving student market.<sup>3</sup> In the long term, the institution's online learning experience would offer a strategic opportunity to explore a new area of education. This system also allowed students to access a variety of materials at any time and from any place. This allows students more flexibility over their learning by allowing them to collect the resources they need and research when they have free time.<sup>4</sup> Furthermore, network-based online learning platforms encourage personal knowledge building up and group knowledge sharing, which can improve learning efficiency, facilitate knowledge innovation, and boost individual and group core competitiveness. As a result, online learning platforms appear to be efforts to take a step forward in the direction of a more effective and high-quality education system.

The success of online classes is determined by the skill of the students, their interest in technology, and the availability of certain necessary resources. In addition to the student's attitude, the facilitator's attitude is critical in making online learning more attractive. Web-based learning has undeniably taken over the world of education and made learning more convenient, but it is not yet a standard part of the curriculum in developing countries like India.

Availability, affordability of technical gadgets such as smartphone, personal computers, laptops, internet connectivity, and a lack of technological skills among the students are all factors that can affect attitude of the students towards online classes in India.<sup>5</sup> Hence, the present study was conducted to assess the attitude of students towards online classes.

## METHODS

The present study was based on an online cross-sectional design. This study was conducted in Varanasi district in Uttar Pradesh during the period of March-April 2021. The ethical clearance was taken from the Ethical Committee, Institute of Medical Sciences, Banaras Hindu University, Varanasi. A total of 228 students studying in some selected schools and colleges and fulfilling the inclusion and exclusion criteria were selected as the participants through the purposive sampling method.

### *Inclusion criteria*

Aged minimum of 14 years and above; both male and female; studying classes between high school to post-graduation; and willing to participate in the study and giving consent along with parental consent were included.

### *Exclusion criteria*

Having any chronic physical and mental illness were excluded.

### *Study tools*

A semi-structured online questionnaire was prepared with help of Google Forms. This questionnaire consisted of two parts, the details are given below-

#### *Socio-demographic questionnaire*

A socio-demographic questionnaire (consisting of variables such as; age, gender, class, father's occupation, family income, family type, residence, attended online classes, having personal smart-phone, having technical knowledge, having parental support, and the number of online classes per day) was prepared by the researchers.

#### *Attitude towards online classes (ATOC) questionnaire*

A self-administrated questionnaire was constructed by the researchers. This questionnaire was based on 5 points Likert scale having 15 items consisting of 7 positive (items number; 1, 2, 3, 4, 5, 13, 14) and 8 negative (item number; 6, 7, 8, 9, 10, 11, 12, 15) statements. Each item was rated by the respondents choosing one option from the given 5 options. The positive items have the weight of respectively; strongly disagree 1, disagree 2, not know 3, agree 4, and strongly agree 5. The negative items have weight respective; strongly disagree 5, disagree 4, not know 3, agree 2, and strongly agree 1. The maximum score of the questionnaire was 75. A score of 45 and above was taken as a positive attitude towards online classes. A pilot study was conducted to assess the reliability of the scale. In the assessment of Cranach's alpha test, the alpha value was found to be 0.86.

### *Procedure*

The researcher contacted the teacher and principal of the selected school and college to conduct the study and requested to provide the list of contacts of the students studying there. The researcher contacted the students and informed them about the purpose of the study. The students who fulfilled the inclusion and exclusion criteria were selected as the participants. Then the link of the online questionnaire was sent to the selected participants through Whatsapp messages and Email.

### *Statistical analysis*

The datasheet was downloaded from Google forms. The SPSS version 20 software was used for the analysis. The categorical variables were analyzed using frequency and percentage. Association between socio-demographic variables and attitude towards online classes was analyzed using Pearson's Chi-square test. The Student's independent

t-test was used to assess the difference between the groups.

## RESULTS

Table 1 shows that a total of 228 students participated in the present study. The majority of the respondents 141 (61.8%) were aged 20 years and above. The proportion of the male respondents was found comparatively high 130 (57%) than female respondents 98 (43%). The majority of the respondents were graduate students 84 (36.8%) and post-graduate students 87 (38.2%). Many of the respondent's fathers were farmers 62 (27.2%). Most of the respondents were from the low family income group. The majority of the respondents belong to the nuclear family 126 (55.3%) and live in urban areas 123 (53.9%).

181 (79.4%) out of the total 228 respondents answered that they attended online classes during the lockdown period. The majority of the respondents 185 (81.1%) had personal smartphones rest of the respondents 43 (18.9%) use their parent's smartphones when they had to attend an online class. Most of the respondents 138 (60.5%) had technical knowledge related to application and software required to attend an online class. 139 (61%) respondents answered that their parents support them in their study. About half of the respondents 115 (50%) replied that they attended 1 to 3 hours of online classes per day during the lockdown period.

Table 2 described the responses of the respondents in each statement of the Likert scale to assess attitude towards online classes among students. In response to the first statement, the majority of the respondents 90 (39.5%) agreed that online classes improve the learning ability of the students. In the response to the second statement, most of the respondents 119(52.2%) believed that online classes increase the understanding of the concepts. On asking about the statement third; online classes improve teacher

and student interaction, the majority of the respondents 87 (38.2%) disagreed. In response to the fourth and fifth statement, approximately 55% of the respondents agreed that online classes save time and it adequate for the students who come to school from a long distance. In response to the sixth statement, the majority of the respondents 83 (36.4%) agreed that online classes have created more problems than it solved. In response to the seventh statement, the proportion of the respondents 78 (34.2%) who agreed that online classes have little effect on students, was found high. In response to the eighth and ninth statement, most of the respondents agreed that online classes will never replace traditional classes and online classes are less interesting than traditional classes. It means that majority of the students are in favor of traditional face-to-face classes than online classes.

In response to the 10th statement majority of the respondents (35.1%) agreed that online classes do not provide the opportunity for the students to express their feeling and satisfy their curiosity. In response to the 11th statement, the proportion of the students who agreed that contentious of online classes on regular basis will decrease the interaction between classmates was found comparatively high (50.9%). Most of the respondents (46.1%) agreed that an increase in the tradition of online classes will decrease social interaction and increase the feeling of social isolation among students. In response to the 13th statement, the majority of the respondents (51.3%) agreed that an increase in the tradition of online will increase the feeling of competition to perform better among students. In response to the 14th statement, most of the respondents (53.9%) agreed that online classes will increase the feeling of self-study and motivate students to learn new things. In response to the 15th statement, the proportion of students who agreed (49.1%) that increases in the tradition of online classes will increase the dependency upon technology and addiction among the students was found comparatively high.

**Table 1: Socio-demographic characteristic of the respondents (N=228).**

Variables	Categories	Frequency (f)	Percentage (%)
Age (years)	Below 20	87	38.2
	20 and above	141	61.8
Gender	Female	98	43.0
	Male	130	57.0
Class	High school	25	11.0
	Intermediate	32	14.0
	Graduation	84	36.8
	Post-graduation	87	38.2
Father's Occupation	Farmer	62	27.2
	Labor	56	24.6
	Shop owner/business	58	25.4
	Private job	19	8.3
	Government job	33	14.5
Family income (Rupees)	Below 5000	44	19.3
	5001-15000	75	32.9
	15001-25000	21	9.2

Continued.

Variables	Categories	Frequency (f)	Percentage (%)
	25001-35000	42	18.4
	Above 35000	46	20.2
Family type	Nuclear	126	55.3
	Joint	102	44.7
Residence	Rural	105	46.1
	Urban	123	53.9
Attended online during lockdown	Yes	181	79.4
	No	47	20.6
Having personal smartphone	Yes	185	81.1
	No	43	18.9
Having technical knowledge	Yes	138	60.5
	No	90	39.5
Parent's support in study	Yes	139	61.0
	No	89	39.0
Number of online classes attended per day (in hours)	0	48	21.1
	1-3	114	50.0
	4-6	66	28.9

Table 2: Attitude towards online classes among the respondents.

Statement	Strongly disagree	Disagree	Undecided	Agree	Strongly agree
	f (%)	f (%)	f (%)	f (%)	f (%)
Online classes improve the learning ability of the students	20 (8.8)	63 (27.6)	22 (9.6)	90 (39.5)	33 (14.5)
Online classes increase understanding of the concepts	20 (8.8)	51 (22.4)	12 (5.3)	119 (52.2)	26 (11.4)
Online classes improve teacher and students interaction	26 (11.4)	87 (38.2)	16 (7.0)	73 (32.0)	26 (11.4)
Online classes save time	11 (4.8)	30 (13.2)	17 (7.5)	131 (57.5)	39 (17.1)
Online classes are adequate for the students who live far away from the school	5 (2.2)	9 (3.9)	25 (11.0)	125 (54.8)	64 (28.1)
Online classes have created more problems than it solved.	26 (11.4)	78 (34.2)	31 (13.6)	83 (36.4)	10 (4.4)
Online classes have little effect on students.	36 (15.8)	78 (34.2)	37 (16.2)	63 (27.6)	14 (6.1)
Online classes will never replace traditional teaching classes	27 (11.8)	53 (23.2)	12 (5.3)	80 (35.1)	56 (24.6)
Online classes are less interesting than traditional teaching classes	25 (11.4)	63 (27.6)	8 (3.5)	106 (46.5)	26 (11.4)
Online classes do not provide opportunity for the students to express their feeling and satisfy their curiosity	36 (15.8)	79 (34.6)	14 (6.1)	80 (35.1)	19 (8.3)
Continuous online classes decrease the interaction between classmates	18 (7.9)	34 (14.9)	15 (6.6)	116 (50.9)	45 (19.7)
Increase in the tradition of online classes will decrease the social interaction and increase feeling of social isolation among students	10 (4.4)	38 (16.7)	22 (9.6)	105 (46.1)	53 (23.2)
Increase in the tradition of online classes will increase the feeling of competition to perform better among students.	21 (9.2)	45 (19.7)	21 (9.2)	117 (51.3)	24 (10.5)
Online classes will increase the feeling of self-study and motivate them to learn new things.	5 (2.2)	50 (21.9)	28 (12.3)	123 (53.9)	22 (9.6)
Increase in the tradition of online classes will increase the dependency upon technology and addiction.	11 (4.8)	32 (14.0)	31 (13.6)	112 (49.1)	42 (18.4)



Table 3 described the association between respondent's socio-demographic characteristics and attitude towards online classes. The proportion of the respondents with a positive attitude towards online classes was found comparatively high in aged below 20 years (60.9%) than aged 20 years and above (45.4%). There was a significant association ( $p<0.05$ ) found between the age of the respondent and attitude towards online classes. The proportion of the students with a positive attitude towards online classes was found nearly equal in both males (52.0%) and females (50.8%). The proportion of the student who found with a positive attitude towards online classes was high among the students who were in high school (72%) and intermediate (65.6%) than student belongs to higher classes such graduation (44%) and post-graduation (47.1%). There was a significant association ( $p<0.05$ ) found between the education level of the respondents and attitude towards online classes. The proportion of the respondents who found with a positive attitude towards online classes their fathers were farmer (54.8%) and labor (57.1%). The proportion of the student with a positive attitude towards online classes was found comparatively high in high family income groups. There was a significant association ( $p<0.001$ ) found between the family income of the respondents and attitude towards online classes. The proportion the respondents with a positive attitude towards online classes was found nearly equal in both the respondents belong to the nuclear family (51.6%) and joint family (51%). The respondents who belong to rural areas (53.3%) were found with a more positive attitude towards online classes than the respondents who belong to urban areas (49.6%).

The respondents who attended the online classes during the lockdown period were found more positive attitudes (55.2%) than those who did not (36.2%). There was a significant association ( $p<0.05$ ) found between joining online classes and attitude towards online classes. The proportion of the respondent with a positive attitude towards online classes was found comparatively high among the respondents who have a personal smart phone (51.9%). The respondents having technical knowledge (68.8%) were found more positive attitude towards online classes. There was a significant association ( $p<0.001$ ) found between technical knowledge and attitude towards online classes. The proportion of the student found with a

positive attitude towards online classes was found comparatively high (57.6%) among the students whose parents supported them in their study. There was a significant association ( $p<0.05$ ) found between parental support in study and attitude towards online classes. The proportion of the respondent with a positive attitude towards online classes was found high (53%) among the students who attended 4 to 6 online classes per day.

Table 4 described the comparison of attitude towards online classes (ATOC) questionnaire score between the respondents who faced some physical and psychological problems due to online classes and who did not. The mean of the ATOC score was found high among the students who did not face digital eye strains ( $46.06\pm8.48$ ) than those who faced it ( $45.72\pm9.70$ ). The mean ATOC score was found high ( $46.53\pm8.34$ ) among the students who did not felt pain in the neck and back due to online classes than those who faced it ( $45.25\pm10.05$ ). The mean of the ATOC score was found high ( $47.10\pm9.83$ ) among the students who did not felt a decline in attention and concentration due to online classes than those who had a decline in attention concentration ( $44.12\pm9.28$ ). There was a significant difference ( $p<0.05$ ) found in attitude towards online classes between the respondents who faced a decline in attention and concentration and those who did not. The mean of the ATOC score was found high ( $47.38\pm9.28$ ) among the respondents found without irritation and anger due to online classes than the respondent found with irritation and anger due to online classes ( $42.43\pm8.54$ ). There was a higher significant difference ( $p<0.001$ ) found in attitude towards online classes between the respondents who felt irritation and anger due to online classes and those who did not. The mean ATOC score was found high ( $47.78\pm8.74$ ) among the respondent found without tension due to online classes than the respondent found with tension due to online classes ( $43.64\pm9.82$ ). There was a significant difference found in attitude towards online classes between the students found with tension and without tension due to online classes.

The Figure 1 shows the proportion of the respondents having positive attitude towards online classes (51.32%) was found comparatively higher than the respondents having negative attitude towards online classes.

**Table 3: Association between respondents characteristics and attitude towards online classes.**

Variables	Categories	Attitude towards online classes		Chi square value	df	P value
		Positive f (%)	Negative f (%)			
Age (years)	Below 20	53 (60.9)	34 (39.1)	5.194	1	0.023*
	20 and above	64 (45.4)	77 (54.6)			
Gender	Female	51 (52.0)	47 (48.0)	0.036	1	0.849
	Male	66 (50.8)	64 (49.2)			
Class	High school	18 (72.0)	7 (28.0)	9.291	3	0.026*
	Intermediate	21 (65.6)	11 (34.4)			
	Graduation	37 (44.0)	47 (56.0)			
	Post-graduation	41 (47.1)	46 (52.9)			

Continued.

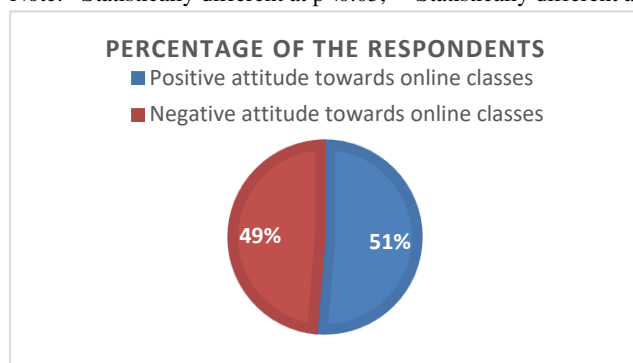
Variables	Categories	Attitude towards online classes		Chi square value	df	P value
		Positive f (%)	Negative f (%)			
Father's occupation	Farmer	34 (54.8)	28 (45.2)	4.247	4	0.374
	Labor	32 (57.1)	24 (42.9)			
	Shop owner/business	28 (48.3)	30 (51.7)			
	Private job	6 (31.6)	13 (68.4)			
	Government job	17 (51.5)	16 (48.5)			
Family income (Rupees)	Below 5000	15 (34.1)	29 (65.9)	27.713	4	0.000**
	5001-15000	27 (30.0)	48 (64.0)			
	15001-25000	12 (57.1)	9 (42.9)			
	25001-35000	32 (76.2)	10 (23.8)			
	Above 35000	31 (67.4)	15 (32.6)			
Family type	Nuclear	65 (51.6)	61 (48.4)	0.008	1	0.927
	Joint	52 (51.0)	50 (49.0)			
Residence	Rural	56 (53.3)	49 (46.7)	0.317	1	0.573
	Urban	61 (49.6)	62 (50.4)			
Attended online during lockdown	Yes	100 (55.2)	81 (44.8)	5.436	1	0.020*
	No	17 (36.2)	30 (63.8)			
Having personal smartphone	Yes	96 (51.9)	89 (48.1)	0.130	1	0.718
	No	21 (48.8)	22 (51.2)			
Having technical knowledge	Yes	95 (68.8)	43 (31.2)	42.977	1	0.000**
	No	22 (24.4)	68 (75.6)			
Parent's support in study	Yes	80 (57.6)	59 (41.0)	5.547	1	0.019*
	No	37 (41.6)	52 (58.4)			
Number of online classes attended per day (in hours)	0	22 (45.8)	26 (54.2)	0.734	1	0.693
	1-3	60 (52.6)	54 (47.4)			
	4-6	35 (53.0)	31 (47.0)			

Note: \*Statistically different at  $p < 0.05$ , \*\*Statistically different at  $p < 0.01$ .

**Table 4: Common physical and psychological problems and attitude towards online classes.**

Common physical and psychological problems faced by the respondents due to online classes		N	ATOC score		t-value	P value
			Mean	SD		
Digital eye strains	Absent	70	46.06	8.48	0.255	0.799
	Present	158	45.72	9.70		
Pain in neck and back	Absent	102	46.53	8.34	1.033	0.303
	Present	126	45.25	10.05		
Decline in attention and concentration	Absent	130	47.10	8.76	2.412	0.017*
	Present	98	44.12	9.83		
Irritation and anger	Absent	156	47.38	9.28	3.839	0.000**
	Present	72	42.43	8.54		
Tension	Absent	120	47.78	8.74	3.429	0.001*
	Present	108	43.64	9.52		

Note: \*Statistically different at  $p < 0.05$ , \*\*Statistically different at  $p < 0.01$ .



**Figure 1: Overall attitude towards online classes among the participants.**

## DISCUSSION

The present study was conducted to assess attitude towards online classes among students residing in Varanasi district, in Uttar Pradesh. The findings of the study indicate that out of a total of 228 respondents a majority of them were aged 20 years and above. These findings are similar to the findings of previous studies conducted in India and other countries.<sup>5-9</sup> The percentage of male respondents (57%) was comparatively high than female respondents (47%). These findings are in correspondence with the findings of some previous studies.<sup>5-8,9,12</sup> In contrast to the present finding studies conducted in India.<sup>6,14</sup> The proportion of the respondent's study in higher classes such as graduation and

post-graduation was comparatively high. Most of the respondents belong to low socio-economic status because a majority of the respondent's fathers do farming and earn less amount of money. Most of the respondents belong to nuclear families and live in urban areas. Similar findings have been observed in some previous studies conducted in India.<sup>5,6</sup>

The findings of the study indicate that most of the students attended online classes during the lockdown period, and some of the students did not attend because their classes were suspended during that duration. These findings are similar to the findings of a study conducted in Himachal Pradesh in India.<sup>5</sup> Most of the respondents had their personal smartphones and had technical knowledge related to the application and software required for the online classes. The results also indicate that a majority of the respondents replied that their parents supported them in their study. The findings of the study also indicate that during the lockdown period a majority of the students attended about 1 to 3 classes per day. These findings are similar to findings of a study conducted in India.<sup>5,6</sup>

In response to the attitude towards online classes' questionnaire, the students who participated in the present study their responses indicated that a majority of them agreed that online classes improve the learning ability of the students and increase the understanding of the concepts. Similarly, a study conducted to assess student's attitudes towards online learning at the tertiary level in Peshawar reported that a majority of the students agree that academic productivity can be improved through online learning and it strengthens the educational concepts.<sup>9</sup> Another study conducted to assess attitude towards E-learning materials reported that E-learning through computer improve their learning ability and also improve their interest.<sup>13</sup> The findings of the present indicate that most of the respondents denied that online classes improve the interaction between teachers and students. These findings are similar to the findings of the other studies conducted in India and other countries.<sup>9,10,15,16</sup> The present findings indicate that a majority of the respondents believed that online classes save time and it is adequate for the students who live far away from the schools. These findings are correspondents to the findings of the previous studies.<sup>9</sup> In contrast to the present findings, a study conducted in India reported that most of the participants agree that e-learning is time-consuming.<sup>13</sup> Most of the respondents of the present study agreed that online classes had created more problems than it solved. In contrast to the presents findings a study reported that most of the respondents participated in that study disagreed that online learning had created more problems rather than solved.<sup>9</sup> A majority of the respondents of the present study disagreed that online classes have little effect on students. In contrast to the present finding, a study conducted in Pakistan had reported that most of the respondents who participated in that study had negative perceptions about the effectiveness of online classes.<sup>8</sup> The proportion of the respondents was found comparatively high who agreed that online classes

are less interesting and it does not provide the opportunity to the students to express their feeling and fulfill their curiosity. A majority of them also agreed that it will never replace the traditional face-to-face classes. These findings are similar to the findings of the studies conducted in India and other countries.<sup>7,8</sup>

Most of the respondents agree that continuous online classes decrease the interaction between classmates and if it will continue for a long time then it will increase the feeling of social isolation among students. A study conducted in Pakistan had reported that E-learning affects the interaction between students and teachers and it also can increase the social isolation among them.<sup>8</sup> The finding of the present study indicates that a majority of the respondents agreed that an increase in the tradition of online classes will increase technological dependency and addiction among the students. Similarly, a study had also reported that most of the participants who participated in that study agreed that online learning makes the students become slaves to technology.<sup>9</sup> About half of the respondents agreed that an increase in the tradition of online classes will increase the feeling of competition to perform better. It will also motivate them to self-study and to learn new things. Other previous studies also had reported similar findings.<sup>9,10,16</sup>

In the present study, the percentage of respondents having a positive attitude towards online classes was found comparatively high among the respondents aged below 20 years. And there was a significant association found between the age of the respondents and attitude towards online classes. In contrast to the present findings, other studies had not reported any association between the age of the students and attitude towards online classes.<sup>5,6</sup> The result of the present study indicates that there was a significant association found between the academic level or class of the respondents and attitude towards online classes among them. Most of the respondents having a positive attitude were high school and intermediate students. Unfortunately, there was no study found that explained the association between academic level and attitude towards online classes. The results of the present study indicate that there was a higher significant association found between the family income of the respondents and attitude towards online classes. The results indicate that the respondents who belong to high-income family groups were found with a more positive attitude towards online classes. A study conducted in Himachal Pradesh had reported similar findings.<sup>5</sup> The result of the present study also found a significant difference in attitude towards online classes between the students who attended online classes and those who did not. In contrast to the findings of the present study, previous studies had found no significant difference in attitude towards online classes between the students who attended online classes and those who did not.<sup>5</sup> The findings of the present study indicate that there was a higher significant association found between having technical knowledge and attitude towards online classes.

The respondents having technical knowledge were found more positive attitude. A study conducted in Karnataka had reported that the level of technical knowledge had a strong association with a positive attitude towards E-learning.<sup>6</sup> The present study also found a significant association between parental support and attitude towards online classes. The results also indicate that the students who got supported in their study had found more positive towards online classes.

The findings of the present study indicate that there was no significant difference found in the attitude towards online classes between the respondents having no physical problems (such as digital eyes strains and pain in the body) and the respondents having physical problems. The results also indicate that there was a significant difference in attitude towards online classes between the respondents having psychological problems (such as a decline in attention, concentration, irritation, anger, and tension) and having psychological problems. A study conducted in India had reported that spending a long time in e-learning increases health issues such as headache, eye strain, fatigue, neck pain, back pain, sleep disturbance, loss of concentration, and anxiety among the students.<sup>14,17</sup>

The result of the present study indicates that the proportion of the respondents having a positive attitude towards online classes was found comparatively higher than the respondents having a negative attitude. In contrast to the present finding, other studies had reported that most of the students had a negative attitude toward online learning.<sup>5,7,8</sup>

### Limitations

There were several limitations of the presents study such as- (i) the respondents were selected through purposive sampling methods; (ii) there was no standardized tools available to assess the attitude towards online classes; (iii) the respondents were selected from some specific schools and college which are not representative of the community; and (iv) face to face interview was not done.

### CONCLUSION

Although, rapid technological development especially in the communication sector has been noticed in India. This technological development in the communication sector had brought a new approach of teaching named online classes or E-learning. During the lockdown period due to the COVID-19 pandemic, teaching through online mode had supported both students and teachers in their academic activities. But a majority of the people do not have the technical knowledge and they are unable to afford smartphones, laptops, computers, and internet connection due to their low income. These problems can affect the attitude towards online classes among students and teachers. Based on the findings of the present study, it can be concluded that a majority of students had a positive attitude towards online classes. There was a significant association found between attitude towards online classes

and socio-demographic variables such as age, academic level, and family income. The students who attended online classes, have technical knowledge, and got supported by their parents in the study were found more positive attitude towards online classes. The present study also indicates that the students who faced any physical and mental psychological they were found with a negative attitude towards online classes.

### ACKNOWLEDGEMENTS

We would like to thank all the participants who participated in this study and those persons who helped in the data collection.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

### REFERENCES

1. Aixia D, Wang D. Factors influencing learner attitudes toward e-learning and development of e-learning environment based on the integrated e-learning platform. *Int J e-Education, e-Business, e-Manag e-Learning*. 2011;1(3):264.
2. Spender D. E-learning: are schools Prepared? Proceedings of the Annual Washington conference on e-learning in a Borderless Market. Google scholar. 2001;21-33.
3. Newton R. Staff attitudes to the development and delivery of e-learning. *New library world*. 2003.
4. Bhatia RP. Features and Effectiveness of E-learning Tools. *Global J Business Manag Info Technol*. 2011;1(1):1-7.
5. Gaur R, Mudgal SK, Kaur S, Sharma R. Undergraduate nursing students' attitude towards online classes during lockdown period in India: imposed or interested. *Int J Community Med Public Health*. 2020;7:3371-7.
6. Vani R. Attitude towards E-learning among nursing students of selected nursing colleges of Mangaluru. *American Int J Res Humanities, Arts and Social Sciences*. 2017;20(1):66-9.
7. Shete NA, Garkal KD, Nanda S. Perceptions of MBBS Students Regarding E-learning during COVID-19 Lockdown. *Int J Health Sci Res*. 2020;10(9):319-22.
8. Abbasi S, Ayoob T, Malik A, Memon SI. Perceptions of students regarding E-learning during Covid-19 at a private medical college. *Pakistan J Med Sci*. 2020;36:57.
9. Ullah O, Khan W, Khan A. Students' attitude towards online learning at tertiary level. *PUTAJ-Human Soc Sci*. 2017;25(1):63-82.
10. Harrison R, Hutt I, Thomas VC, Motteram G, Else K, Rawlings B, Gemmell I. A Cross-Sectional Study to Describe Academics' Confidence, Attitudes, and



- Experience of Online Distance Learning in Higher Education. *J Educators Online*. 2017;14(2):2.
11. Obeidat MM. Undergraduate Students' Perspective About Online Learning: A Case Study Of Hashemite University Students In Jordan. *European J Molecular Clinical Med*. 2021;7(8):4054-71.
  12. Konwar IH. A study on attitude of college students towards e-learning with special Reference to North Lakhimpur of Lakhimpur District, Assam. *Int J Info*. 2017;4(1):1-9.
  13. 13. Bishnu GC. Higher Secondary Level Students' Attitude toward Use of E-Learning Materials in Health and Population Education. *J Health Promotion*. 2018;6:11-7.
  14. Singh HK, Joshi A, Malepati RN, Najeeb S, Balakrishna P, Pannerselvam NK, et al. A survey of E-learning methods in nursing and medical education during COVID-19 pandemic in India. *Nurse Educ Today*. 2021;99:104796.
  15. Chakraborty P, Mittal P, Gupta MS, Yadav S, Arora A. Opinion of students on online education during the COVID-19 pandemic. *Human Behavior Emerging Technol*. 2020.
  16. Fahad FN. Students' attitudes and perceptions towards the effectiveness of mobile learning in King Saud University, Saudi Arabia. *TOJET*. 2009;8(2):111-9.
  17. Srivastava Mona. Covid 19: A mental health crisis. *Int J Medical Studies*. 2020;5(10):10-24.

**Cite this article as:** Kumar S, Prakash S, Srivastava M. Attitude towards online classes among school and college going students during lockdown due to COVID-19 pandemic. *Int J Community Med Public Health* 2021;8:3446-54.