# **Original Research Article**

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# A cross-sectional study on impact of online classes among undergraduate students of Shimoga institute of medical science, Shivamogga due to COVID-19

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#### **ABSTRACT**

**Background:** The COVID-19 has resulted in shutdown of all the schools all over the world. This has led globally, over 1.2 billion children to remain out of classroom. As a result, education has changed from classroom teaching to elearning, whereby teaching is on digital platforms. Although online classes have several advantages but there are disadvantages also. In this regard the study aims to explore whether the online classes effect on both physical and mental health of students along with the effect on education.

**Methods:** A cross-sectional study was done from October-November 2020 (2 months). A pre-designed questionnaire was given to phase-III, part-I and part-II students (253) in Google forms. The database was created in MS-excel sheet and results were expressed in percentages.

**Results:** Out of 253 students 166 students responded, which was 65.6% out of whom physical health impact like eye problems due to online-classes was most for dry eyes (54.8%) and least for double vision (13.9%). Impact on mental health was most for headache (54.8%) and least for depression (36.7%). Impact on education was most for lack of practical based learning (97.6%) and was less for difficulty in understanding subject (63.9%).

**Conclusions:** Students had more negative impact on education with online-classes. So, except during crisis period offline classes are preferred.

Keywords: Students, COVID-19, Online-classes

# INTRODUCTION

The COVID-19 has resulted in shutdown of all schools all over the world. This has led globally, over 1.2 billion children to remain out of class room. As a result, education has changed from classroom teaching to elearning, whereby teaching is on digital platforms. The physical classes were essentially suspended till assist take note as individuals anticipated it to be as it were a month or two long delay at best. Be that as it may, as, with time, the masses figured it out that the COVID-19 widespread was not vanishing any time before long which delayed deferring of learning was affecting the longer term of children, online mediums of education were desperately switched to. The speed of the spread of the epidemic, the

closure of higher instruction educate and the move to online educating was so quick that it barely gave any time to arrange and to reflect on the potential dangers or the potential opportunities that such a sudden alter might bring.<sup>3</sup> Although the online classes have several advantages there are disadvantages also. In this regard the study aims to explore whether the online classes effect on both physical and mental health of students along with the effect on education.<sup>4</sup>

## **Objectives**

The objectives were to estimate the impact of online classes on health of students and to estimate the impact of online classes on education of students.

#### **METHODS**

#### Study design

The study design was of a descriptive cross-sectional study.

#### Study area

The study conducted at Shimoga institute of medical science (S.I.M.S) Shimoga.

#### Study participants

The participants involved were M.B.B.S. phase III, part I and part II students of S.I.M.S.

## Study period

The study conducted from October 2020 to November 2020 (2 months).

#### Methodology of data collection

Permission was taken from the dean and director of S.I.M.S and consent from students to conduct the study.

A pre-designed questionnaire was sent to the students through Google forms and response was collected.

# Methodology of data analysis

The responses received were transferred to MS-excel sheet and analysis was done. Results were expressed in percentages.

# **RESULTS**

Out of 253 students 166 students responded which was 65.6% out of whom physical health impact like eye problems due to online-classes was most for dry eyes (54.8%). Others were burning sensation (36.7%), redness of eyes (28.9%) blurred vision (32.5%) double vision (13.9%). Impact on mental health was most for tiredness (58.4%), others were headache (54.8%), depression (36.7%), anxiety (41%). Impact on education was most for lack of practical based learning (97.6%), others werenot suitable for every topic (91.6%), lack of motivation (80.1%), lack of concentration (80.1%), difficulty in understanding subject (63.9%).

Table 1: Impact on physical and mental health.

Physical health	Mental health
Dry eyes-54.8%	Tiredness- 58.4%
Burning of eyes-36.7%	Headache- 54.8%
Blurred vision-32.5%	Anxiety- 41%
Redness of eyes-28.9%	Depression- 36.7%
Double vision-13.9%	

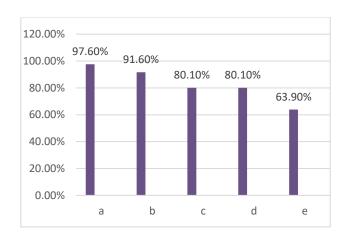


Figure 1: Impact on education.

a-lack of practical based learning. b-not suitable for every topic. c-lack of motivation. d-lack of concentration. e-difficulty in understanding subject.

#### **DISCUSSION**

In the present study impact of physical health were 54.8% had dry eyes, 32.5% had blurred vision and 36.7% had burning sensation of eyes. The study conducted by Singh et al on impact of online teaching on health in 5 universities in India during 2020 showed that 26.18% had dry eyes, 28.72% had blurred vision and 29.82% had burning sensation of eyes. <sup>5</sup> This could be because of more exposure to online classes in our study and also the capacity to adopt to online classes varies from one person to another.

In case of mental health, headache was prevalent in 54.8% of participants. The study conducted by Singh et al. showed that headache was present in 55.27% of participants.<sup>5</sup> This might be because of more mental stress and eye strain experienced by participants.

Then in education impact was most for lack of practical based learning (97.6%) and least was difficulty in understanding subject (63.9%). Overall impact of online classes was more negative on education.

#### CONCLUSION

Students had negative impact on education with online classes so except during crisis period, rest of the time offline classes are suggested.

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