

# Covid-19, The Reason Behind The Self-Reported Cognitive Distress, Physiological Impacts and Reluctance To Vaccine Among Students

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## Abstract

Covid-19 (SARS-CoV-2) pandemic has drastically dulled the livelihood, economic condition, psychic health, physiological health, and cognitive abilities of mankind explicitly students throughout the world. Every Covid-19 wave comes with the surety of thwarting the recuperation of the preceded one. The study aim is to consider the upshots of the pandemic on the modus vivendi of students, quarantined from social life, of age ranging from 13-25 and demeaning effect on their learning abilities as the medium of learning shifts to online that concertedly breed physical and mental health problems. To address this objective, we conducted a nationwide online survey assessing the physiological and mental health of students. There were 345 students, none of whom was tested positive for Covid-19, from Pakistan who filled the questionnaire and reported their mental and physiological health. Results revealed that the most recurrent complications among students during SARS-CoV-2 pandemic were moderate to severe frequent headache (82.1.3%), exasperation (78.3%), giddiness (79.4%), restlessness (70.5%), dulled memory (81.7%), these all impediments can be the aftermath of less physical activity (26.4%) jointly with excess phone/screen usage (93.5%). And (90.2%) of them were also found reluctant to get vaccinated. The survey reported that teenagers are at the highest risk of developing physiological and mental health problems that can have long-term adverse impacts.

## Introduction

The first SARS-CoV-2 case was broadcasted at end of December 2019 in Wuhan (China) then outspread towards many other territories including the Islamic Republic of Pakistan and WHO declared it as a pandemic by 11 March 2020 [1]. The ferocity of coronavirus resulted in enduring lockdowns globally to curtail the advancement of an infection. The quarantine sundered the people from their beloved and friends and resulted in the emergence of many mental and physiological problems due to persistent restrictions as the people were unable to cope with the prevailing curbs (Javed, Sarwer, Soto, & Mashwani) (Wright, Williams, & Veldhuijzen van Zanten). The psychological response associated with lockdowns has been studied since the initial outbreak of this disease and is getting severe during the second

or third wave [2]. Emerging psychiatric conditions are the hallmark repercussions of this pandemic (Rajkumar).

Novel coronavirus (SARS-CoV-2) and associated tragedies have substantially affected people's mental health when people were confined only to their homes during lockdowns (Correia). Currently, it has become a major peril for all the states across the world and many countries have encountered the 2nd or 3rd wave of this pandemic which has bred certain cognitive problems in students. South Asian countries are also suffering from coronavirus and Pakistan is one of them [3]. The first case in Pakistan was reported on February 26, 2020, from Karachi, and the lockdown was observed on March 23, 2020. And till February 10, 2021 the reported cases were 557,591 [4,5,6]. Out of which 12,185 were fatalities. Pakistan, being a middle-income country with mounting debt and a surging fiscal deficit, is facing an economic bust and limited medical facilities to maintain the physiological and mental status of students in the face of this pandemic (Mukhtar, Javed, Arooj, & Sethi).

The pandemic situation has gravely influenced the modus vivendi of students because the lockdown restraint led to social distancing, closure of educational institutes, switch to online distance learning, and cancellation of exams with media mounting up the fear of Covid-19 broad casting the metastasizing of the SARS-CoV-2 and the casualties on account of Covid-19 that engendered mental stress in students and detrimentally affected the physiological and mental health of students both acute and chronically (Daly, Sutin, & Robinson) (Loades) (da Silva, Rocha, Buheji, Jahrami, & Cunha) (Javed, Sarwer, Soto, & Mashwani) (Chen). Students suffer from increased anxiety and stress levels, depression due to uncertainty of the education system and future career, social isolation, and income issues (Browning) (Yao, Chen, & Xu). A student's performance mainly depends on their mental health so they may bring unfortunate consequences to the individual as well as society (Syed, Ali, & Khan). Students were at different stages of their education when the unanticipated lockdown was implemented. Some were just about to appear in their final exams, some were ready to set foot into their professional life and some just have started their class/semester (Bao, Sun, Meng, Shi, & Lu). The precariousness about their education and future submit them to great stress and depression (Rajkumar). So the students are a vulnerable and unfortified population group suffering from a higher level of elevated depression,

anxiety, distress, headache as compared to the general population (Jia).

## Methodology

A total of 345 candidates aged between 13-25 participated in the study and filled the survey questionnaire. All the participants were residents of Pakistan and none of them reported as SARS-CoV-2 positive. The participants responded through an online survey platform from 25 April to 10 May 2021. No personal or confidential information was collected. The majority of students were from Lahore and cities in the vicinity [7,8].

Chi-Square Analysis through IBM SPSS (version 21) was performed to investigate the correlation between students being isolated at home on account of the pandemic, to cognitive and physiological problems [9,10].

## Results and discussion:

Interpreted data manifested that the students experienced negative impacts of the Covid-19 pandemic circumstances on their physiological, mental health, cognitive abilities, and lifestyle. Self-reported Data exhibited negative changes like the dearth of concentration in study, stress, anxiety, frustration, dizziness, headache, sadness, increased anger, and restlessness. Moreover, they have also been reported with diminished physical activity, increased food consumption, staying lethargic, increased fear of being infected as well as reluctance to vaccine and surfeit screen usage that ensued in various physiological problems such as obesity, hormonal imbalance, dulled physical and mental growth, muscle weakness, and fluctuated blood pressure Which indiscriminately breeds Hypertension, myocardial infarction, stroke, and many other fatal diseases afterwards.

**Table 1:** Chi-Square Analysis of home isolation with mental health

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7.490a	1	0.006		
Continuity Correction	4.458	1	0.035		
Likelihood Ratio	5.613	1	0.018		
Fisher's Exact Test				0.028	0.028
Linear-by-Linear Association	7.468	1	0.006		

N of Valid Cases	345				
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The observed P-value is less than  $\alpha=0.05$  so we reject a null hypothesis and concluded that the being isolated at home and mental health problems are associated with each other and are negatively correlated.

**Table 2:** Chi-Square Analysis of home isolation with physiological health

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.888a	1	0.009		
Continuity Correction	4.048	1	0.044		
Likelihood Ratio	5.301	1	0.021		
Fisher's Exact Test				0.032	0.032
Linear-by-Linear Association	6.868	1	0.009		
N of Valid Cases	345				

The observed P-value is less than  $\alpha=0.05$  so we reject a null hypothesis and concluded that the being isolated at home and physiological problems are associated with each other and are negatively correlated [11].

The reported survey result showed that the majority of students suffering from mental and physiological problems are in the age range of 17-22 and most of these are college or universities going students in Lahore city or cities in proximity. About 88% of these students, closure of educational institutes, parks and other places, the mental health of students is diminishing to a greater extent. They are also suffering from frequent headaches, dizziness, anxiety, or restlessness and fear with reluctance to vaccination. 90.6% students found reluctant to vaccination, 82.1% candidates reported frequent headaches, 79.4% were reported as having dizziness, 70.5% had restlessness and 81.7% had difficulty in learning on the online learning platform. These all are on account of the indolent lifestyle and increased screen usage. All these factors collectively contributed to adverse cognitive and physiological health [12,13].

Moreover, they are not permitted to do outdoor chores on account of lockdown restraint. 74% contributors of the survey don't play outdoor and on account of excessive usage of mobile phones and indolence, they are also suffering from distress, headache, insomnia, obesity, dizziness and fear with reluctance to vaccine that results in hormonal imbalance, turmoil in physical and mental development, and many other physiological problems [14,15].

## Conclusion

SARS-CoV-2 pandemic has drastically impacted the lifestyle of people as its gravity leads to the implementation of lockdown. Students are the hallmark target of this pandemic and are at precarious risk of developing mental and physiological complications during the COVID-19 pandemic owing to the uncertainty about academic sessions, future success, and exceptional careers. They are reported to suffer from headaches, restlessness, dizziness, decreased self-regulation and fear together with reluctance to vaccination that disturbed their cognitive abilities and physiological health. Compounding all these subsyndromal symptoms owing to the pandemic breeds attention to future mental and physical health problems. En-masse all these complications lead to several chronic problems like loss of confidence, proneness, obesity, and hormonal imbalance which if sustain can induce several ferocious complications like hypertension, myocardial infarction, and stroke, etc.

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