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## A survey study on impact of online classes on stress level among school children

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### Abstract

Coronavirus has demonstrated to be a significant troublesome part of human existence across the world. Prominently, there has been a critical change in the ordinary lifestyle with individuals being needed to isolate to prevent spread of the disease. In education, the limitations have made it mandatory usage of online learning. This paper features the impact of online learning on stress level among school children to analyze their psychological well-being.

**Samples:** 337 school students from Delhi/ Ghaziabad schools took part in an online survey.

**Tool:** "Perceived Stress Questionnaire (PSQ)" developed by Levenstein *et al.*, 1993. Descriptive statistics was applied.

**Result:** The mean of PSQ among the students was 2.61; mean of male students was 2.59 and mean of female students was 2.63. And PSQ Index score among the students was 0.81 which is higher.

**Conclusion:** The study has shown that online learning has been a significant reason of stress despite being a solution to the challenges of the Covid 19 lockdown to learning.

**Keywords:** COVID-19, lockdown, online learning, mental health, psychological stress, school level students

### Introduction

A new pneumonia-coronavirus outbreak emerged in Wuhan, Hubei Province, China in December 2019 (Kang *et al.*, 2020) [15]. Globally, till 27 February 2021, the confirmed cases have risen to 112,902,746 (approx.) of COVID-19, and the death cases have risen to including 2,508,679 (approx.), (according to WHO), affecting approximately 188 countries (Johns Hopkins University and School of Medicine, 2020). Due to the spread of the virus, many industries had been influenced by the lockdown. This blockade has caused losses to the lives of staff in various departments. The block has severely affected students and their learning process.

Studies have shown that samples' personal factors had no direct impact on user satisfaction, and platform availability has the greatest impact on user satisfaction (Chen *et al.*, 2020) [15]. During an outbreak, individuals are under extreme stress, especially for students and healthcare professionals, it may lead to a higher risk of anxiety & depression (Naser *et al.*, 2020) [16]. In India, exams have been postponed, university admissions are delayed due to uncertainty (Economic Times, Times of India, 2020), and many other confusions have disrupted student education. Due to the coronavirus COVID-19 pandemic, school closures have affected the education of more than 1.5 billion children and youth worldwide.

The prevalence of COVID-19 in children is low (between 0.8% and 3.3%), and most children only show mild physical symptoms or asymptomatic. However, although COVID-19 may not be as severe and deadly in children as it is in adults, its impact on their mental health is not yet fully understood. Children and adolescents face tremendous changes in their daily lives, including school suspensions, family confinement, and social distancing rules, which can place a heavy burden on them. In addition, it is reported that violence against children has increased during family confinement, putting children at risk of abuse and trauma. (Ravens-Sieberer *et al.*, 2021) [9]

According to reports, 44% of children between the age of 12 and 18 exhibit depressive symptoms, 37% exhibit anxiety, and 31% exhibit both symptoms. Recently reproduced high levels of depression and anxiety symptoms.

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Two non-representative studies of children and adolescents aged 5 to 18 from India featured the adverse consequence of the pandemic on children's mental health (Bamotra *et al.*, 2019)<sup>[4]</sup>.

### Procedure and Methodology

An online survey was conducted through google form.

**Sample:** A total number of subjects 337 (142 Male and 195 Female) school students. Students were selected as subjects from various schools of Delhi and Ghaziabad. The age of the

subjects was between 14 to 18 years.

**Instrument:** Stress level was measured by "Perceived Stress Questionnaire (PSQ)" developed by Levenstein *et al.*, 1993<sup>[17]</sup>.

### Statistical Techniques

Mean and standard deviation were applied through Ms Excel for the evaluation of the data after the detailed discussion with the experts.

### Results

**Table 1:** PSQ item mean (standard deviation) scores overall, and separately for gender.

N= 337	Male (142)			Female (195)			
	Items	Total	Mean (SD)	Total	Mean (SD)	Total	Mean (SD)
	Item 1	846	2.52 (0.79)	351	2.49 (0.82)	497	2.56 (0.76)
	Item 2	913	2.73 (0.95)	375	2.66 (0.94)	539	2.78 (0.95)
	Item 3	822	2.45 (1.00)	335	2.38 (1.0)	479	2.47 (1.00)
	Item 4	1048	3.12 (0.90)	439	3.11 (0.88)	612	3.15 (0.91)
	Item 5	810	2.41 (1.11)	343	2.43 (1.15)	469	2.42 (1.08)
	Item 6	820	2.45 (0.97)	325	2.30 (0.94)	492	2.54 (0.98)
	Item 7	844	2.51 (0.98)	356	2.52 (0.99)	478	2.46 (0.98)
	Item 8	890	2.64 (0.99)	367	2.60 (0.98)	524	2.70 (1.00)
	Item 9	908	2.7 (1.08)	359	2.55 (1.07)	553	2.85 (1.06)
	Item 10	777	2.31 (1.00)	325	2.30 (1.03)	445	2.29 (0.98)
	Item 11	970	2.88 (0.90)	400	2.84 (0.86)	563	2.90 (0.93)
	Item 12	890	2.65 (1.01)	377	2.67 (1.02)	513	2.64 (1.00)
	Item 13	876	2.61 (0.96)	366	2.60 (1.02)	506	2.61 (0.93)
	Item 14	888	2.65 (1)	372	2.64 (0.99)	517	2.66 (1.03)
	Item 15	844	2.52 (.99)	353	2.50 (0.94)	494	2.55 (1.01)
	Item 16	860	2.56 (1)	366	2.60 (0.97)	492	2.54 (1.02)
	Item 17	1002	2.98 (1.05)	434	3.08 (1.05)	565	2.91 (1.07)
	Item 18	908	2.71 (0.97)	383	2.72 (0.90)	531	2.74 (0.99)
	Item 19	797	2.37 (1.09)	329	2.33 (1.09)	470	2.42 (1.07)
	Item 20	781	2.33 (1.06)	310	2.21 (1.07)	473	2.44 (1.04)
	Item 21	961	2.86 (1.09)	401	2.84 (1.06)	551	2.84 (1.12)
	Item 22	966	2.88 (1.1)	402	2.85 (1.14)	564	2.91 (1.07)
	Item 23	882	2.63 (0.99)	363	2.57 (1.00)	509	2.62 (0.99)
	Item 24	813	2.42 (1.06)	327	2.32 (1.03)	483	2.49 (1.08)
	Item 25	874	2.60 (1.02)	374	2.65 (1.04)	503	2.59 (1.02)
	Item 26	866	2.58 (1.02)	370	2.62 (1.01)	496	2.56 (1.02)
	Item 27	835	2.48 (0.97)	345	2.45 (0.97)	482	2.48 (0.98)
	Item 28	925	2.75	376	2.67 (1.04)	548	2.82 (0.96)

		(0.99)				
Item 29	795	2.36 (0.99)	339	2.40 (1.02)	455	2.35 (0.97)
Item 30	901	2.69 (1.05)	382	2.71 (1.05)	562	2.71 (1.03)
Total	26312	78.38 (30.08)	10944	77.63 (30.09)	15365	79.02 (30.03)
PSQ Index		0.81		0.53		0.54

The total number of 337 respondents gave responses to 30 questions in perceived stress questionnaire. The table reveals, total mean and standard deviation of total respondents 78.38 and 30.08 respectively; total mean and standard deviation of male respondents 77.63 and 30.09 respectively; total mean and standard deviation of female respondents 79.02 and 30.03 respectively.

### Discussion of the Study

Public health emergencies may have psychological effects on students, such as stress, anxiety, worries, etc. The psychological effects of COVID19 on college students such as anxiety and distress. The purpose of this study was to observe the impact of online courses on student stress.

Perceived stress is a measure of how stressful a situation in life is assessed. This survey shows that, in general, women have the highest average scores, except for item 10 “You feel you’re doing things you really like”; 15 “You feel frustrated”; 29 “You feel mentally exhausted”. However, females and males reported highest on the same item; 30 “You feel under pressure from deadlines”. As shown in Table 1. The seven-factor model includes the following factors:

“fatigue” (items 1, 8,13, 15), “harassment (items 2, 6, 19, 24), “irritability (items 3, 10),” lack of “joy” (items 5, 7,16,17,21,23,25), “overload” (items 4,11,28,29) and “worry” (items 9,18,20,22,30).

This study aims to explore the stress levels of online courses during the COVID-19 outbreak from classes IX to XII. The students are from Delhi and Ghaziabad. The results show that during the COVID 19 outbreak and lock-in period, students have higher PSQ values.

Children have fewer physical activities, COVID-19 has changed the way and objects of play, and sports/entertainment activities have also been cancelled. The physical activity with their friends has been reduced due to outdoor activities, because the family actively obeys the order to stay away from society and restrict peer interaction. Therefore, it is impossible for children to fully retain their regular physical exercise methods. And interact with their friends or peer group. (Sheroun *et al.*, 2020)<sup>[12]</sup>.

### Conclusion

The present study highlights the perceived stress by school students who lead 44 a hectic routine and lifestyle. The mean of PSQ among the students was 2.61; mean of male students was 2.59 and mean of female students was 2.63. And PSQ Index score among the students was 0.81 which is higher. So, we believe that providing school students psychological support and assurance can help the students to overcome the stress to cope in the lockdown and perform better in their studies.

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