

EDUCATION AND STRESS MANAGEMENT DURING PANDEMICS – A SURVEY FOR PUNE CITY

*Mr. Anil G. Wathare & **Dr. Varsha Deshpande

* Research Student & **Assistant Professor, Brihan Maharashtra College of Commerce, Pune.

E-mail Id.: anil_wathare@yahoo.com

Abstract:

COVID-19 has changed education for learners of all ages. It appears that there has been some educational losses at many levels. There has been an increased anxiety and a silent depression associated with the changes in delivery of education. But there are not any t data on long-term outcomes or impact of the pandemic on learning of students at graduate/post-graduate levels. . Guidance from oversighted organizations regarding the safety and efficacy of new delivery modalities for education have been quickly forged. It is no surprise that the socioeconomic gaps and gaps for special learners have widened. The professions that teach by incrementally graduated internships are also severely affected and have had to make drastic changes. This paper makes an attempt to find out the real issues faced by students of High school/Graduates/Post graduate during Covid-19 pandemic times. It appears that the students and Educational Institutes & parents were under stress in managing the studies under the adverse environment of the pandemic. This paper makes an attempt to find the real issues through Primary (on-line survey) and secondary data gathering, analysis and make suggestions/recommendations based on analysis of data/ way forward, to manage the stress and cope-up with Education.

Scope of the Paper: - Survey is being for Graduate/Post-graduate students of Pune City.

Key words: COVID-19, Education, Virtual Learning, Special Education, Medical School Education, Stress, Digital Platforms.

Copyright © 2022 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

Overview:

The transition to an online education during the coronavirus disease 2019 (covid-19) pandemic may bring about adverse educational changes and adverse health consequences for children and young adult learners in high school, college, and professional schools. An attempt is being made to conduct a survey and get primary data from students of graduation/post-graduation LEVELS IN PUNE CITY. This primary data is being used to analyse the impact of pandemic on education and stress levels on students.

References / Literature Review:

1. Anderson S., Haeder S., Caseman K. When adolescents are in school during COVID-19, coordination between school-based health centers and education is key. *J Adolesc Health*. 2020;67(6):745–746. [PMC free article] [PubMed] [Google Scholar]

2. . Ammar A., Brach M., Trabelsi K. Effects of COVID-19 home confinement on eating behaviour and physical activity: results of the ECLB-COVID19 international online survey. *Nutrients*. 2020;12(6):1583. [PMC free article] [PubMed] [Google Scholar]
3. Liang L., Ren H., Cao R. The effect of COVID-19 on youth mental health. *Psychiatr Q*. 2020;91:841–852. [PMC free article] [PubMed] [Google Scholar]
4. The Effect of COVID-19 on Education
Jacob Hoofman, MS^{2a} and Elizabeth Secord, MD^b Published online 2021 May 19. doi: 10.1016/j.pcl.2021.05.009

A. Students Depression during Covid-19:

Students undergoing Graduation & Post-graduation have lost a great deal during this pandemic. What should have been a time of establishing more independence has been hampered by shelter-in-place recommendations? Internships, Exposure to Field work/Projects, Graduation Ceremonies,, Physical placement interviews, athletic events, college visits, and many other social and educational events have been altered or lost and cannot be recaptured.

B. Impact on Teaching on Digital Platforms:

Increased social media use during COVID-19, along with traditional forms of education moving to digital platforms, has led to the majority of adolescents spending significantly more time in front of screens. Excessive screen time is well-known to be associated with poor sleep, sedentary habits, mental health problems, and physical health issues. With decreased access to physical activity, especially in crowded inner-city areas, and increased dependence on screen time for schooling, it is more difficult to craft easy solutions to the screen time issue.

C Attention Deficit Dis-order (ADD):

Early data on virtual schooling children with attention deficit disorder (ADD) and attention deficit with hyperactivity (ADHD) shows that adolescents with ADD/ADHD found the switch to virtual learning more anxiety producing and more challenging than their peers. If children with ADD/ADHD had an additional diagnosis of autism or depression, they reported increased anxiety with the college shutdown.

D. Diet Related Issues faced by Students during Covid-19:

Many families report that the stress of the pandemic has led to a poorer diet in children with an increase in the consumption of sweet and fried foods. Shelter at home orders and online education have led to fewer exercise opportunities. Research brings out that daily sitting had increased from 5 to 8 hours a day and binge eating, snacking, and the number of meals were all significantly increased owing to lockdown conditions and stay-at-home initiatives. There is growing evidence that diets high in sugar and fat can play a detrimental role in cognition and should be of increased concern in light of the pandemic.

E Food and Housing Security during Covid-19:

Many families have been impacted negatively by the loss of wages, leading to food insecurity and housing insecurity; some of loss this is a consequence of the need for parents to be at home with young children who cannot attend in-person school. There is evidence that this economic instability is leading to an increase in depression and anxiety. Parents reported behavioral problems in their children that they attributed to the pandemic and virtual schooling. Students who have taken loans for Education were highly stressed.

F. Impact of Overall Change in Environment during Pandemic on Quality of Education:

Many researchers are examining how the new environment affects learners' mental, physical, and social health to

Help compensate for any losses incurred by this pandemic and to better prepare for future pandemics. There is a paucity of data at this juncture, but some investigators have extrapolated from earlier school shutdowns owing to hurricanes and other natural disasters.

- Virtual learning has become a norm during COVID-19.
- Children requiring special learning services, those living in poverty, and those speaking English as a second language have lost more from the pandemic educational changes.
- For children with attention deficit disorder and no comorbidities, virtual learning has sometimes been advantageous.
- Students at Graduate levels have been found to adjust to the new methods of Education delivered via Digital platforms.
- Students of Graduate levels being more matured and tech say were able to manage the Education curriculum though sitting at Home and missing the college environment made them a bit uneasy.

G. Behavioral Analysis (BA) of students and Impact of Covid-19 on Stress Levels and Management suggestions:

In this Research paper a survey was made to collect primary data on the subject of Education delivery via Digital platforms during the pandemic.

A survey was conducted for Pune city students who were undergoing Graduate/Post graduate courses. Pune is the second largest city in terms of student population and number of Universities/colleges. It is estimated that the population of students in Pune is around 5 Lakh. The following are the brief details of the survey:-

H. Hypothesis: - There are 2 Hypothesis:

1. **Null Hypothesis H0 1(1):-** Most of the students felt that they were stressed with the over-all environment of on-line classes and were un-comfortable with the On-line education during the pandemic.
2. **Null Hypothesis H0 (2):-** Most of the students perceived that the Quality/Content of Education delivered through on-line Digital platforms was satisfactory during the Covid-19 pandemic.

Sample Size Calculation: Cochran's formula is considered especially appropriate in situations with large populations. Here we have used the Cochran's formula as the student population in Pune Metropolitan region is around 5 Lakh.

The Cochran formula is:

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where:

n = sample size

Z= Value from Z table. (For 95% confidence level Z value is 1.96 as per normal table)

e is the desired level of precision (i.e. the margin of error),

p is the (estimated) proportion of the population which has the attribute in question,

q is 1 – p.

Taking 95% as confidence level we have Z value = 1.96 from Z table.

Therefore Error (e) = 5% = 0.05

p = Total no. of Graduation/PG students in Pune Metropolitan Region (MMR) / Total population of Pune MMR

$$= 3 \text{ Lakh} / 74 \text{ Lakh} = 0.04$$

$$q = 1 - p$$

$$= 1 - 0.04$$

$$= 0.95$$

For 95% Confidence level:-

By using above Cochran's formula we calculate sample size for Pune city Region

Therefore, **ideal Sample Size (n)** = $1.96 * 1.96 * 0.104 * 0.95 / 0.05 * 0.05$

$$= 0.37 / 0.0025 = 51$$

Survey Methodology & Data Collection:-

A survey was conducted for getting primary data from the students who were studying for Graduate & Post-graduate courses in Pune city. A Questionnaire was designed for Data collection and Responses were obtained.. A total of 16 Questions (Nominal scale and Likert scale) were made for the survey and Responses were obtained on-line through Google Form Link. A total of 50 students responded to the survey.

H. Data Analysis & Hypothesis Testing:

When we consider, the null speculation is true, the sampling distribution of the test statistic is called as **chi-squared distribution**. The chi-squared test helps to determine whether there is a notable difference between the normal frequencies and the observed frequencies in one or more classes or categories. It gives the probability of independent variables.

Testing of Hypothesis H₀ (1): The response to this Hypothesis Question was analysed with Chi-square test in Excel Advanced and the Calculations/data is as follows:

Observed and Expected Values:

Do you feel that the online classes environment was adding stress and so made you feel uncomfortable		Gender		Observed Values			Gender		Expected Values
		Female	Male	Total			Female	Male	Total
	Neutral	5	9	14		Neutral	18.72	30.72	14
	No	10	10	20		No	18.6	30.6	20
	Yes	4	12	16		Yes	18.68	30.68	16
	Total	19	31	50		Total	19	31	50

Null Hypothesis H ₀ 1(1) :- Most of the students felt that they were stressed with the over-all environment of on-line classes and were un-comfortable with the		Gender		Calculate d Ex= (O-E) ² /E	Results of Hypothesis Testing - Null Hypothesis H ₀ 1(1) Chi-Sq Alfa= 0.034 Chi-Sq P value=0.05 ThResult :-e Chi-Sq ALFA value (0.03) IS LESS THAN Ch-Sq P Value (0.05) so Null Hypothesis is REJECTED
		Response	Female	Male	Grand Tot
		Neutral	4.28642E-15	1.53E-09	0.000
		satisfied	1.41345E-09	3.3E-06	0.000
		unsatisfied	1.05956E-05	0.00339	0.003
		d Total			
		Chi-Square Alfa Value		0.003404	
		P- Value		0.05	

We Rejected the Null Hypothesis H₀ (1) and accept the Alternate Hypothesis that is:-

Alternate I Hypothesis H₁ 1(1): Most of the students felt that they were NOT stressed with the over-all

Environment of on-line classes and were comfortable with the On-line education during the pandemic.

Testing of Hypothesis H0 (2):

Null Hypothesis H0 (2): Most of the students perceived that the Quality of Education delivered through on-line Digital platforms was satisfactory during the Covid-19 pandemic.

Observed and Expected values in Chi-Square Test done in advance Excel as follows:-

of How do you rate the overall education delivered via digital/online platforms during the pandemic?		Gender		Observed Values		Gender		Expected Values
	Response	Female	Male	Grand Total	Response	Female	Male	Grand Total
	Neutral	6	8	14	Neutral	5.32	8.68	14
	satisfied	9	14	23	satisfied	8.74	14.26	23
	unsatisfied	4	9	13	unsatisfied	4.94	8.06	13
	d Total	19	31	50	d Total			50

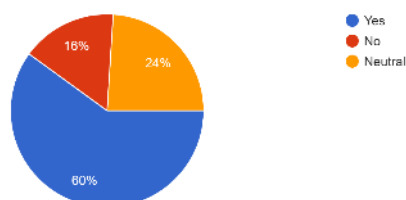
Testing with Alfa P- Values P=0.05		Formula from Excel			
Null Hypothesis H0 (2) :- Most of the students perceived that the Quality of Education delivered through on-line Digital platforms was satisfactory during the Covid-19 pandemic .		Gender		CHISQTEST Formula from Excel	Results of Hypothesis Testing - Null Hypothesis H0(2)
	Response	Female	Male	Grand Total	
	Neutral	0.802054091	0.919597	1.722	
	satisfied	0.860290946	0.944442	1.805	
	unsatisfied	0.865673819	0.946661	1.812	
	d Total			5.339	
Chi-Square Alfa Value		5.338697			
P- Value		0.05			

We Accept the Null Hypothesis H0 (2)

I. Other Findngs from the Survey:

- 98% students had access to on-line classes via Digital platforms. 64% were able to cope up /adjust to the environment.
- 80% of students said that on-line classes were not as efficient as Physical classes on campus.
- 60% of students said that there attention was diverted (reduced attention) due to Home environment

7. Did you find the lectures boring and that your attention was diverted by the Home environment?
50 responses



- 76 %of students were comfortable with the Home environment as there was no other option.
- 38% students faced financial issues for making payments of Fees.
- 56% students faced stress due to Job/loss/Deaths/Financial issues.
- Majority 82% students were satisfied with the availability of Communication Network (Broadband/Mobile) and related systems (Laptop)
- 70% of the students had Privacy at their Home to attend on-line classes.

J. Conclusion & Recommendations:

The COVID-19 pandemic has affected and will continue to affect the delivery of knowledge and skills at all levels of education.

1. Majority of the students of Graduation level felt that they were not stressed during the Pandemic with on-line classes.
2. They were also satisfied with the Quality/Content of Education delivered via Digital platforms.
3. Majority of the students were able to cope-up with Education delivered via Digital platforms but they prefer physical classes.
4. There appears to be some interruption/disturbance due to Home environment/privacy/job losses/Financial /other losses which added stress to the students learning.
5. There was an impact for those already at a disadvantage because of socioeconomic class, language, and financial needs and were most severely affected by the COVID-19 pandemic.
6. W the Teachers and the Institutions e can guide students by counselling & financial support, as required to reduce the stress levels of students.
7. Some students felt that their attention was diverted (ADD syndrome) due to Home environment. During pandemic.
8. There was an increase in weight for most of the students due to long hours of sitting on computer and lack of physical activity.

Cite This Article:

***Mr. Anil G. Wathare & **Dr. Varsha Deshpande, (2022).** *Education and Stress Management during Pandemics – a Survey for Pune City, Aarhat Multidisciplinary International Education Research Journal, XI (III) May – June, 124-129.*