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## Effect of COVID-19 on Stress and Academic Achievement of Secondary School Students in District Poonch

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### Article Details

### ABSTRACT

**Keywords:** COVID-19, Stress, Academic Achievement

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COVID-19 has affected almost every sector of the present world including secondary education, especially in AJK. For this purpose, the researchers aimed to investigate the effect of COVID-19 Pandemic on stress and academic achievement of secondary level students in District Poonch AJK. Descriptive survey was conducted using cluster sampling technique. A total of 320 respondents were contacted and data gathered through pre tested questionnaire. Among these respondents 155 were boys while 165 were girls students of class 9th & 10th. The research instrument was prepared after extensive research, proofreading, and pilot testing and data was collected by visiting schools of District Poonch. The data was analyzed using SPSS. Frequency tables for every question were made and the percentage and regression was calculated. Statistical techniques were used keeping in view the types of questions. The findings of the study revealed that majority of students were worried about academic activities, remained upset helpless, nervous and having problems in concentrating, paying attention, or remembering things during COVID-19. The main findings of the study unfolded that COVID-19 caused severe stress and anxiety in students and their academic achievement was also lowered. It is recommended that the education department should take the necessary steps to provide facilities to students to cope with the challenge posed by this deadly pandemic in education sector..

## INTRODUCTION

The coronavirus is badly affecting the lives and living of people all over the world after being declared a global pandemic by WHO on 11 March 2020. It was first identified in December 2019 in Wuhan, China (Shafi, Liu, and Ren, 2020). Coronavirus is originated in cats, camels, and bats but did not infect them. Sometimes this virus spreads to different other animal species and mutates. Incidentally, the virus transfers to humans and infected them. About COVID-19 it was said that the first people infected in Wuhan, China in a food market where they contacted live animals and meat. Researchers don't know exactly how people were infected but they were aware that this virus can spread vastly through close interaction. Basically, this virus causes respiratory illness in humans. SARS (Severe acute respiratory syndrome), MERS (Middle East respiratory syndrome), and the common cold are examples of coronavirus that cause illness in humans. They get their name, "corona," from the many crown-like spikes on the surface of the virus.

The virus spreads and travels in respiratory droplets when an infected person coughs, sneezes, talks, sings, or breathes within six feet of distance. It remains in the air for minutes to hours and then spread. It also spread through close contact (touching, shaking hands) with an infected person and by touching your eyes, mouth, or nose before washing your hands after touching those surfaces where the virus is already present. When COVID-19 enters your body through the mouth, nose, or eyes, it travels to the back of your nasal passages and mucous membrane in the back of the throat. Here It attaches to cells and multiplies and moves into lung tissues and spread to the other body tissues. Researchers say that people infected with COVID-19 can spread the virus to others before experiencing symptoms. The time between becoming infected and showing symptoms can range from two to 14 days. The average time before experiencing symptoms is five days. Symptoms can range in severity from very mild to severe. In about 80% of patients, COVID-19 causes only mild symptoms. When you have symptoms, you are no longer contagious after 10 days.

After analyzing data across the country and in some large cities, looking at the number of confirmed cases and deaths based on race and ethnicity and related factors researchers found that African Americans and the Latino-Hispanic populations have disproportionately higher rates of hospitalizations and deaths due to COVID-19. Researchers are still studying other factors that may make ethnic groups more susceptible to negative COVID-19 outcomes, including genetics and possible differences in lung tissue as well as socioeconomic status and the social environment and systems. The U.S. Centers for Disease Control says that "the immune

response to COVID-19 is not yet understood." Because this is a new strain of coronavirus, scientists are still collecting information and research on the virus so it's still too early to know if you can get it a second time if you've had it once (Clinic, 2021).

Every country adopted different strategies according to its own current situations to minimize the loss caused by the outbreak of Covid-19 because there is no clear standard medical evidence for the treatment of the disease till now, except one common strategy adopted by all the countries was 'lockdown' and Pakistan also adopted this strategy. Lockdown is defined, "as a set of measures to reduce community transmission of COVID-19 that are compulsory, and which are applied indiscriminately to the general population" (Mboera et al., 2020).

The implementation and execution, as well as consequences of lockdown, vary from country to country. From the evidence, it has been proved that lockdown is the only best non-pharmaceutical solution to control this virus but at the same time, it comes with some negative impacts such as economic downfall, closure of schools and learning institutions, emotional and psychology instability (Brooks et al., 2020).

Covid-19 pandemic and lockdown badly affected school, college and university-going students of age group between 18 and 25. It is assumed that this pandemic is creating stress among students due to delays in examinations and barriers to teach (Roy et al., 2020). Due to the closure of educational and learning institutions approximately 1.6 billion students worldwide are affected and 58 countries retard their evaluation process of the students, whereas 11 countries have canceled this process for the current batch (UNESCO, 2020a). As a result of this uncertainty anxiety and stress have been observed in college students. Anxiety is an uncomfortable and unpleasant feeling that an individual experiences in a stressed or fearful situation (Hjeltne et al., 2018). Physiologically, it is a state of tension that may prepare a person for a fight or flight reaction. Students face it because of the pressure of being in a new environment and a strong desire to perform well. Students with stress and anxiety disorders like disturbances in mood, thinking, behavior, and physiological activity, show a passive attitude in their academics such as lack of interest in work, poor performance in examinations, and a disturbed routine. Stress is a kind of negative emotion that is caused when the physical or mental pressure imposed on an individual is more than he or she can tolerate as a result of an uncertain event or situation.

There are three reasons behind a stress

- i. The unsettling effects of change
- ii. The feeling that an outside force is challenging or threatening you

iii. The feeling that you have lost personal control (Medicine, 2017).

School or college students sometimes faced stressful situations. Some of the more common reasons for stress defined by NIMH the National Institute of Mental Health (Association, 2005)) for school or college students are:

- Increased academic demands
- Being on your own in a new environment
- Changes in family relations
- Financial responsibilities
- Changes in your social life
- Exposure to new people, ideas, and temptations
- Awareness of your sexual identity and orientation
- Preparing for life after graduation.

School or academic performance's main purpose is to achieve an educational goal related to learning. There are several mechanisms that are adopted by the schools to attain the best performance of students. Performance may vary according to circumstances, organic and environmental conditions. Academic Performance is “the product given by the students and it is usually expressed through school grades” (Otero, 2007). Achieving the goals and objectives of a program or course that a student learns is called academic performance which is described as grades as a result of different tests. Academic performance is usually measured using GPA (Grade Point Average) and it is the understanding level that is presented in an area or subject (Willcox, 2011).

Common factors of Academic Performance are level of intelligence, interests, skills, study habits, personality, motivation, confidence, and the relationship between students and teachers. Performance diverged when a gap arises between the academic performance of the student and the performance which he expects. Unsatisfactory academic performance is the one that is below the expected performance (Martí, 2003).

COVID-19 is a fast-growing pandemic with mutations. Alhamdulillah, we can say that till yet COVID-19 proved not as dangerous in Pakistan as in other countries but no one can be assured about it. The reasons behind it may be well-planned government precautionary measures, humidity rate in Pakistan, hot weather, tropical conditions, and widespread BCG vaccinations with Chinas help (Ilyas, Azuine, and Tamiz, 2020).

In Pakistan, experts from DUHS (Dow University of Health Sciences), claimed that they

had formulated a drug to treat COVID-19 patients (News, 2020). DUHS medical specialist claimed that intravenous immunoglobulin was a great achievement against COVID-19. Intravenous immunoglobulin was manufactured with purified antibodies obtained from the recovered COVID-19 patients and can be given through a vein to fight against infections (Anon, 2020). In the current scenario when the entire world is under great threat due to this global pandemic, the students' future is also in great danger and risk because of the closure of schools and their stress level is increasing. In addition, it is highly uncertain when students' life and studies will be normal again. Therefore, it is very important to analyze this situation in secondary level students in District Poonch Rawalakot. Even though this pandemic has affected the lives of people all around the globe but developed countries with a great level of internet connectivity can absorb this shock to some extent, particularly in academics. This subject becomes extremely vital in the context of Poonch, Rawalakot where students have less access to the internet. The infrastructure for Information Communication and Technology is at its infancy in this backward area, which adds to this problem. Due to this reason, this topic needs to be investigated in the context of Poonch, Rawalakot.

## **OBJECTIVES OF STUDY**

1. To find out the effect of COVID-19 on the stress of students' of secondary school students in District Poonch.
2. To find out the effect of COVID-19 on students' academic performance of secondary school students in District Poonch.

## **REVIEW OF RELATED LITERATURE**

According to monitoring by the United Nations Educational, Scientific, and Cultural Organization (UNESCO), over 87% of the student population worldwide is impacted by the closure of educational institutions (Araújo et al., 2020). Students, as well as universities, became uncertain about online teaching, procedures for assessments, and semester-end final examinations. Due to lockdown, regular classroom teaching was not possible, so a switch to online teaching for students becomes effective (P.Suhu., 2020). Online learning provides an alternative way of communication between students themselves or between students and teachers (Pragholadriapati, 2020). However, many students cannot access the online teaching/learning process because of a lack of either the means or the instruments due to the economical and digital divide (UNESCO, 2020). This situation is more likely to prevail in developing countries where internet infrastructure is poor and there is low connectivity, which

can cause stress and anxiety in students.

It is found in Pakistan that the occurrence of stress and anxiety leads to a decreased level of mental health in students. He also highlights that mental health issues are increasing day by day in students due to this pandemic and because of lockdown (Aqeel et al., 2020).

In a study about the effects of the pandemic on student performance for different subjects, it is found that returning students are expected to start fall with approximately 63 to 68% of the learning gains in reading and 37 to 50% of the learning gains in mathematics relative to a typical school year (Kuhfeld et al., 2020). A study conducted in Indonesia through the Ministry of Education and Culture and followed by all local governments' findings reveal a positive and significant relationship between religiosity, school support, teachers, and parents to academic stress (Pragholadriapati, 2020).

A study among 3936 French students was conducted to collect socio-demographic data, living and learning conditions, stress symptoms, and social support among French students during the lockdown. Among them, 15.2% of students experienced moderate stress, and 9.8%, severe level of stress. For females, the hospitalized relatives for COVID-19 were the main risk factor for stress (Bourion-Bédès et al., 2020).

In a survey from 200 randomly selected students at King Saud University, Riyadh Saudi Arabia about MERS-CoV (2014) epidemic impact on medical students', it was found that female students had a significantly higher mean stress level than males. Among students 77% reported minimal stress, 18.4% reported mild stress, 4.6% reported moderate stress, and none of them reported severe stress (Al-Rabiaah et al., 2020).

World Bank study found that school closures because of COVID-19 caused 4% learning loss in Pakistani students at the school level. The remote Learning trend is increasing but in Pakistan, remote learning is not accessible to everyone. (Geven and Hasan, 2020) Pakistan is a developing country with low per capita income and low resources and in rural areas, the situation is worse, so the students of the rural areas sometimes have to quit their education (Zahra et al., 2020).

An online study was conducted in four educational institutions of Pakistan to assess depression, stress, sources of disease, and coping strategies. Some 1134 responses were collected through an online questionnaire using Google forms. The study found that male students have low stress and depression as compared to their female colleagues. Younger students have more stress scores than their older colleagues. Students having a patient in their family or an infected

friend showed more intensity of depression and stress. It was found that the majority of respondents were adopted religious or spiritual ways to cope with the challenges that arose due to the Covid-19 pandemic (Salman et al., 2020).

Due to COVID-19 mankind has to face unique challenges in their personal and social lives which they have never faced before like social distancing and closure of educational institutions this situation leaves only digital solutions to continue educational activities and to adopt the change in the education system (Maqsood et al., 2021). This sudden change in the education sector put forward some inequalities and challenges all over the world but especially in developing countries (Oyedotun, 2020).

Researchers have found that after COVID-19 emerged students' academic performance has decreased (analyzed through standardized test scores). In the Netherlands, 15% of students aged between seven to eleven from all the schools showed differences in scores on spelling, reading comprehension, and math from 2017 to 2020 with no difference in scores before 2020. But at the beginning of the COVID-19 pandemic, students' overall scores dropped by 3 percentile points in spelling, reading comprehension, and math (Engzell, Frey, and Verhagen, 2021).

A study in San Juan de Lurigancho (a district in Lima, Peru) found a significant relationship between stress and academic performance of 300 students from the 3rd, 4th and 5th grades of secondary schools.

An online survey was conducted by 2530 members of the University of Valladolid, in Spain to analyze the psychological impact of COVID-19 in the university community during the early stage of the pandemic. A total of 50.43% of respondents presented moderate to the severe impact of the pandemic. Impact of covid-19 was found higher in Arts & Humanities and Social Sciences & Law students as they showed higher scores related to stress, anxiety, and depression as compared to students from Engineering & Architecture, while the staff of university has lower scores in all measures compared to students. The survey results emphasized providing timely crisis-oriented psychological services as well as careful monitoring of students (Odrizola-González et al., 2020).



## RESEARCH METHODOLOGY

Descriptive research design and survey was conducted to collect the data for this research. For this research population was students who enrolled at the secondary level in different private and public sector schools in district Poonch. Sample was 350 students at secondary level taken as a sample by cluster sampling technique from different private and public schools from all four tehsils; Rawalakot, Thorar, Hajeera and Abbaspur of district Poonch. This type of sampling is one of the easiest to implement in schools, and it consumes less time. A questionnaire was used to collect primary data from students. An easy-to-understand questionnaire was used to collect basic information about Covid-19 stress and their achievement. The questionnaire was prepared by searching different survey questionnaires and taking relevant information according to this research objectives and requirements. The researchers prepared a questionnaire keeping in mind the objectives of the study and then presented it to 10 faculty members working in different fields for their expert opinion. A pilot application was conducted through a questionnaire to 20 participants who represented the target population of the survey study to check its validity. The reliability of the instrument was checked by Cronbach's Alpha and the result was .744. First of all, a permission letter was got from District Education Officer to start this survey. Data was collected with the help of a questionnaire from secondary level public and private students in districts Poonch. Every tehsil was declared as a cluster whereas schools and students were selected by simple random sampling technique from every Tehsil. Data was collected manually from school to school by personal visits. After the collection of data, it was analyzed by using SPSS. Every question's frequency was calculated then all the questions results were tabulated, defined, and interpreted. A research frequency and percentages were calculated and regression was also used.

## DATA ANALYSIS

**TABLE 1: UPSET MOOD DURING COVID-19**

Statement	Options	Frequency	Percentage
Did you remain	Never	72	22.5
Upset in the last	Sometimes	224	70.0
Few days?	Often	24	7.5
	Total	320	100.0



Table 1 shows that 22.5 % (72) students remain never upset, 70% (224) remain sometimes upset while 7.5% (24) remain often upset in the last few months. It means the majority was upset during Covid -19

**TABLE 2: FEELING HELPLESS DURING COVID-19**

Statement	Options	Frequency	Percentage
Did you feel helpless in the last few months?	Never	146	45.6
	Sometimes	108	33.8
	Often	66	20.6
	Total	320	100.0

Table 2 shows that 45.6 % (146) students remain never helpless, 33.8% (108) remain sometimes helpless while 20.6% (66) remain often helpless in the last few months. It shows that more than 50% students feel helpless in this period.

**TABLE 3: NERVOUSNESS**

Statement	Options	Frequency	Percentage
Have you felt nervous in the last few months?	Never	100	31.3
	Sometimes	162	50.6
	Often	58	18.1
	Total	320	100.0

Table 3 shows that 31.3 % (100) students never felt nervous, 50.6% (162) felt nervousness sometimes upset while 18.1% (58) remain often nervous in the last few months. Almost 70% of students felt nervous during this period.

**TABLE 4: HANDLING PERSONAL PROBLEMS.**

Statement	Options	Frequency	Percentage
Have you felt that you could handle the personal problems in the last few months?	Never	31	9.7
	Sometimes	154	48.1
	Often	135	42.2
	Total	320	100.0

Table 4 shows that 9.7 % (31) students could handle personal problems, 48.1% (154) sometimes while 42.2% (135) often handle their personal problems in the last few months. Around 91% of students said that they can handle their personal problems during this pandemic.

**TABLE 5: CONTROL OF THE SITUATION**

Statement	Options	Frequency	Percentage
Have you felt that things were under your control in the last few months?	Never	128	40.0
	Sometimes	90	28.1
	Often	102	31.9
	Total	320	100.0

Table 5 shows that 40 % ( 128), 28.1 % ( 90), 31.9 % ( 102), students never, sometimes or often felt that things were under their control. More than half of the students felt that things were under their control

**TABLE 6: CONTROL THINGS DURING COVID-19 PERIOD**

Statement	Options	Frequency	Percentage
Did you feel that you can control things in the last few months?	Never	68	21.3
	Sometimes	214	66.9
	Often	38	11.9
	Total	320	100.0

Table 6 shows that 21.3% (68) students answered that they can never control things, 66.9% (214) thought it sometimes and 11.9% (38) choose option 3 as the answer. More than 75% of students agreed that they can control things in this critical situation.

**TABLE 7: SITUATION BEYOND CONTROL**

Statement	Options	Frequency	Percentage
Did you feel that things were beyond your control in the last few months?	Never	99	30.9
	Sometimes	160	50.0
	Often	61	19.1
	Total	320	100.0

Table 7 shows that 30.9% (99) students answered that things were never beyond their control, 50% (160) said that sometimes things were beyond their control and 19.1% (61) often think that things were beyond their control. Most students think that things were beyond their control.

**TABLE 8: ACCOMPLISHMENT OF TASKS**

Statement	Options	Frequency	Percentage
Have you felt that you could accomplish your	Never	44	13.8
	Sometimes	121	37.8

task in the last few months?	Often	155	48.4
	Total	320	100.0

Table 8 shows that 13.8% (44) students never accomplished their task, 37.8% (121) sometimes while 48.4% (155) often accomplished their tasks. Almost 85% of students accomplish their tasks during COVID-19.

**TABLE 9: DIFFICULTIES DURING COVID-19**

Statement	Options	Frequency	Percentage
Did you feel that	Never	43	13.4
difficulties were	Sometimes	169	52.8
increasing in the last few	Often	108	33.8
months?	Total	320	100.0

Table 9 shows that 13.4% (43) students felt that difficulties were increasing, 52.8% considered it sometimes and 33.8% (108) often thought that difficulties were increasing in the last few months. More than 85% of students think that difficulties were increasing in the last few months.

**TABLE 10: WORRY ABOUT STUDIES**

Statement	Options	Frequency	Percentage
Did you worry	Never	42	13.1
about your studies	Sometimes	109	34.1
during pandemic?	Often	169	52.8
	Total	320	100.0

Table 10 shows that 13.1% (42) students never worried about their studies, 34.1% (109) sometimes worried and 52.8% (169) often worried about their studies during this pandemic. About 76.9% of students were concerned about their studies and have worried about it.

## EFFECT OF COVID-19 ON ACADEMIC ACHIEVEMENT

**TABLE 11: MODEL SUMMARY**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.247a	.061	.052	11.26776

Table 11 shows that the factors which we have discussed (Worries, Technology, and Student

Satisfaction) have a 25% impact on the students' academic performance or marks.

**TABLE 12: ANOVA<sup>A</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2596.646	3	865.549	6.817	.000 <sup>b</sup>
	Residual	40120.150	316	126.963		
	Total	42716.796	319			

a. Dependent Variable: Your attained marks in send-up or last exam %

b. Predictors: (Constant), worries, technology, student satisfaction

The result shows that these three factors which are worries, technology, and students' satisfaction have a significant effect on students' marks or academic performance.

**TABLE 13: COEFFICIENTS**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	92.238	6.633		13.905	.000
	Student Satisfaction	-3.945	2.227	-.099	-1.771	.078
	Technology	-7.358	2.381	-.171	-3.090	.002
	Worries	2.476	1.019	.135	2.429	.016

Dependent Variable: Your attained marks in send-up or last exam % It is found out that the students who use technology have a positive effect on their marks and perform better than the students who don't use technology. The students who take their personal circumstances for a little of the time performed better in exams and have good grades and those who take worries seriously all of the time did not have good grades in exams.

## CONCLUSIONS & RECOMMENDATIONS

The first objective of the study was to find out the effects of COVID-19 on the stress level of secondary school students in district Poonch. It is found in the study that the majority of secondary level students in district Poonch were feeling stressed due to COVID-19. The second objective of the study was to find out the effects of COVID-19 on the academic performance of Secondary school students in district Poonch. It is found that the majority of students' performance has been dropped or lesser as compared to regular classes.

Pandemic is a reality and repercussions of the COVID-19 were significantly noticed during this study at students' performance and stress level. Based on the finding, the study recommends the following policy implications. First of all, to counter the learning losses, on a micro level, educational policy makers should determine potential supportive measures that increase the active learning time on task. On a macro level, national policy makers should determine potential compensatory measures to support students in their learning and to avoid failed educational careers. In this regard, systematic online material and software have been found to compensate for learning losses, specifically in high-risk children. Secondly, it is necessary to improve the overall Information Communication and Technology in the localities selected for the study. This will definitely improve students' experience of online education. Thirdly, students of these rural areas lack the required level of expertise to use online applications. Thus, there is a dire need to educate students on the use of electronic applications to improve their learning because the pandemic may stay for many years. Vaccination process should be fast and priority should be given to education related people so that the education process could be started. After vaccinated they will be less worried about virus infections and this will also help in controlling their stress.

## REFERENCES

- Al-Rabiaah, Abdulkarim, Mohamad Hani Temsah, Ayman A. Al-Eyadhy, Gamal M. Hasan, Fahad Al-Zamil, Sarah Al-Subaie, Fahad Alsohime, Amr Jamal, Ali Alhaboob, Basma Al-Saadi, and Ali Mohammed Somily. (2020). "Middle East Respiratory Syndrome-Corona Virus (MERS-CoV) Associated Stress among Medical Students at a University Teaching Hospital in Saudi Arabia." *Journal of Infection and Public Health* 13(5):687–91.
- Araújo, Francisco Jonathan de Oliveira, Ligia Samara Abrantes de Lima, Pedro Ivo Martins Cidade, Camila Bezerra Nobre, and Modesto Leite Rolim Neto. (2020). "Impact Of Sars-Cov-2 And Its Reverberation In Global Higher Education And Mental Health." *Psychiatry Research* 288(March):112977.
- Association, National Mental Health. (2005) "Finding Hope and Help: College Student and Depression Pilot Initiative." *National Mental Health Association* (2005).
- Bourion-Bédès, Stéphanie, Cyril Tarquinio, Martine Batt, Pascale Tarquinio, Romain Lebreuil, Christine Sorsana, Karine Legrand, Hélène Rousseau, and Cédric Baumann. (2020). "Psychological Impact of the COVID-19 Outbreak on Students in a French Region Severely Affected by the Disease: Results of the PIMS-CoV 19 Study." *Psychiatry Research* 295.

- Brooks, Samantha K., Rebecca K. Webster, Louise E. Smith, Lisa Woodland, Simon Wessely, Neil Greenberg, and Gideon James Rubin. (2020). "The Psychological Impact of Quarantine and How to Reduce It: Rapid Review of the Evidence." *The Lancet* 395(10227):912–20.
- Clinic, Cleveland. (2021). "Coronavirus, COVID-19." (2021).
- Engzell, Per, Arun Frey, and Mark D. Verhagen. (2021). "Learning Loss Due to School Closures during the COVID-19 Pandemic." *Proceedings of the National Academy of Sciences of the United States of America* 118(17).
- Geven, Koen, and Amer Hasan. (2020). "Learning Losses in Pakistan Due to COVID-19 School Closures." *Learning Losses in Pakistan Due to COVID-19 School Closures* (October).
- Hjeltne, A., Moltu, C., Schanche, E., Jansen, Y., Binder, P.E., (2018). "ECA: The Economic Impact of COVID-19 on African Cities Likely to Be Acute through a Sharp Decline in Productivity, Jobs & Revenues | Africa Renewal." *United Nations*. Retrieved July 23, 2020
- Ilyas, Nasir, Romuladus E. Azuine, and Alina Tamiz. (2020). "COVID-19 Pandemic in Pakistan." *International Journal of Translational Medical Research and Public Health* 4(1):37–49. doi: 10.21106/ijtmrph.139.
- Kuhfeld, Megan, James Soland, Beth Tarasawa, Angela Johnson, Erik Ruzek, and Jing Liu. (2020). "Projecting the Potential Impact of COVID-19 School Closures on Academic Achievement." *Educational Researcher* 49(8):549–65.
- Maqsood, Aneela, Jaffar Abbas, Ghazala Rehman, and Riaqa Mubeen. (2021). "The Paradigm Shift for Educational System Continuance in the Advent of COVID-19 Pandemic: Mental Health Challenges and Reflections." *Current Research in Behavioral Sciences* 2(December 2020):100011.
- Martí, E.(2003). "Represent the World Externally. Children's Construction of External Systems of Representation."
- Mboera, Leonard E. G., George O. Akipede, and David McCoy. (2020). "Mitigating Lockdown Challenges in Response to COVID-19 in Sub-Saharan Africa." *International Journal of Infectious Diseases* 96(2019):308–10.
- Medicine, Army. 2017. "Introduction to Stress Management." *Personal Development Track* 86– 93.
- Otero, Martínez. (2007). "The Adolescents before the Study. Causes and Consequences of Academic Performance." (2007).

- Oyedotun, Temitayo Deborah. (2020). "Sudden Change of Pedagogy in Education Driven by COVID-19: Perspectives and Evaluation from a Developing Country." *Research in Globalization* 2(September):100029.
- P, Sahu. n.d. "Closure of Universities Due to Coronavirus Disease (2019) (COVID-19): Impact on Education and Mental Health of Students and Academic Staff."
- Pragholadriapati, An.(2020). "Covid-19 Impact on Students." 1–6. doi: 10.35542 / osf .io/ 895ed.
- Roy, Deblina, Sarvodaya Tripathy, Sujita Kumar Kar, Nivedita Sharma, Sudhir Kumar Verma, and Vikas Kaushal. (2020). "Study of Knowledge, Attitude, Anxiety & Perceived Mental Healthcare Need in Indian Population during COVID-19 Pandemic." *Asian Journal of Psychiatry* 51(April):102083.
- Salman, Muhammad, Noman Asif, Zia Ul Mustafa, Tahir Mehmood Khan, Naureen Shehzadi, Khalid Hussain, Humera Tahir, Muhammad Husnnain Raza, and Muhammad Tanveer Khan. (2020). "Psychological Impact of COVID-19 on Pakistani University Students and How They Are Coping." *MedRxiv*.
- Shafi, Mohsin, Junrong Liu, and Wenju Ren. (2020). "Impact of COVID-19 Pandemic on Micro, Small, and Medium-Sized Enterprises Operating in Pakistan." *Research in Globalization* 2:100018..
- UNESCO. (2020a). "Exams and Assessments in COVID-19 Crisis: Fairness at the Centre." *United Nations Educational, Scientific and Cultural Organization* (2020):1.
- Willcox, M. del R. (2011). "Risk and Protective Factors for Academic Performance: A Descriptive Study in Psychology Students from a Private University." 55(2011):1–9.
- Zahra, Fatima, Akhtar Gul, Anum Iqbal, Tanbila Ghafoor, and Ayesha Ambreen. (2020). "The Impact of Covid-19 on Rural Areas Students of Pakistan: Moderating Role of HEC Policy and Internet Service." *Asian Journal of Contemporary Education* 4(2):69–79.